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ANS Executive Director: Dr. Ute Wartenberg

CNL Staff

Editor Emeritus: James C. Spilman

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In this issue we are pleased to present a Technical Note sandwiched between two feature-length papers. The historical context of "Hogge Money" is studied in the first paper written by Dr. Louis Jordan, one of our associate editors. This coinage was the first to be struck for the English colonies in America, specifically Bermuda which was also known as the Somer Islands. Hogge money is known in four denominations: shilling, sixpence, threepence, and twopence. Struck on lightly silvered copper planchets, the obverse depicts a hog with the legend SOMMER ISLANDS. The reverse shows a fully rigged ship.

Relying on primary source documents, Lou has determined approximately when the Hogge coinage was introduced into circulation by the Somer Islands Company. He concludes the coinage was a short-term solution to an economic problem. Laborers for the company initially worked under a credit system and apparently they expressed a desire for a more tangible form of pay. Thus, the reason for Hogge money. Once the infrastructure for the colony was in place and the islands surveyed, the colonists turned from construction to farming. When this occurred the need for Hogge money disappeared as tobacco became the basic currency in the Somer Islands. For a better understanding of the discussion be sure to refer to the charming 1626 map of the Somer Islands for locations mentioned within the text.

Next, Leo Shane reports in a Technical Note the discovery of a St. Patrick farthing that appears to have been stuck with a segmented collar. This discovery is significant because in the December 2002 issue of *The Colonial Newsletter* Dr. Brian Danforth concluded that the St.

Patrick coinage was manufactured by Peter Blondeau using his newly invented one-step single collar technology. Although this apparent discovery is counter to one of Brian's conclusions, it in no way disproves the many facts about the coinage that Brian has uncovered. It only emphasizes the difficulty in ferreting out the specifics of an event that had been lost in the mists of time.

The second feature-length paper is authored by two New Jersey copper enthusiasts, Dr. Roger Moore and Dennis Wierzba. The father of the series, Dr. Edward Maris, was the first to catalogue the copper coins produced by the State of New Jersey shortly after America won her independence from England in 1783. In 1881 he published a large folio titled *A Historical Sketch of the Coins of New Jersey* which contained a large black and white photograph of the then known die varieties and their marriages. To obtain the photograph it is believed that Dr. Maris assembled a zinc plate containing actual coins, electrotypes of coins, and possibly photographs of individual coins. Later it is known that he assembled additional plates as new varieties were discovered. This paper documents these plates, explaining the differences between them, and their sequence of issue. Significantly, for the first time, the plate owned by The New Jersey Historical Society has been photographed and is presented within the paper.

The library at the American Numismatic Society (ANS) is an important resource for all branches of numismatics. For many years the library has been under the able guidance of Librarian Francis D. Campbell. As the ANS prepares to move to a more accessible location in downtown New York City, a fund raising program is under way to endow a library chair named in honor of Frank Campbell. A library committee has been formed with the purpose of raising \$2,000,000; part of which comes from a prospective match by the National Endowment for the Humanities.

For colonial coinage enthusiasts, the library holds an abundance of specialized material. To mention a few items there are the Dr. Thomas Hall notebooks, the Damon G. Douglas manu-

scripts, the complete 32-volume inventory of the Brand Collection, and, importantly, the original Machin's Mills indenture. Library holdings are available for personal inspection, plus they are listed on-line.

If you wish to make a donation in support of the Francis D. Campbell Library Chair, make out a check with a notation citing the library chair and mail it to the ANS or call the ANS if you wish to use a credit card. See sequential page 2462 for contact information.

Gary Trudgen
gtrudgen@aol.com

Somer Islands “Hogge Money” of 1616: The Historical Context

by

Louis Jordan; South Bend, IN

The Bermuda Islands were named for Juan de Bermúdez, who briefly landed there, by chance, in 1505. Bermúdez was commanding the ship *La Garza*, which was transporting African slaves to work in the New World copper mines.¹ Soon thereafter, Captain Gonzalo Fernández de Oviedo y Valdés recorded in his *Historia general y natural de las Indias* that while he was anchored off the shore of Bermuda in 1515, he issued orders that some pigs be transported from his ship to the island. Oviedo anticipated the pigs would multiply and thereby provide a source of food for future transatlantic expeditions.² This is the origin of the Bermudian hog portrayed on Hogge money.

The English claim to Bermuda

In 1607, a century after the Bermúdez discovery voyage of 1505, the Virginia Company of London founded the colony of Jamestown. By 1608, starvation and disease had killed nearly half of the settlers, therefore the company officers in London prepared a relief fleet for the colony. Nine ships departed Plymouth, England, on June 2, 1609, under the command of Admiral George Somers. Admiral Somers, with the governor designate of the Virginia Plantation, Sir Thomas Gates, traveled on the fleet flagship the *Sea Venture*, under the command of Captain Christopher Newport.³ On July 24th, about eight days from Virginia, a hurricane developed. A contemporary

1 The date of the Bermúdez expedition was not mentioned in any contemporary chronicle. Most of the sources specifically state Bermúdez was commanding the ship *La Garza* at the time of the discovery; these chronicles include: Gonzalo Fernández de Oviedo y Valdés in his *Historia general y natural de las Indias*, Alonso de Santa Cruz in his *Islario general de todas las islas del mundo*, Antonio de Herrera y Tordesillas in his *Historia general de los hechos de los castellanos en las islas y terra firme del mar oceano* and López de Velasco in his *Geografía y descripción universal de las Indias*. Since the chronicle by Oviedo describing his expedition of 1515 mentioned the Bermúdez expedition as an earlier episode, it is clear the discovery of Bermuda by Bermúdez had to have been before 1515. In 1892 Henry Harrisse in his *The Discovery of North America* identified the discovery voyage with an expedition to Hispanola that left Seville on April 15, 1502, and returned on June 3, 1503, because Bermúdez was a member of that expedition. Bermúdez made another trip to the New World from Seville between November 22, 1503 and July of 1504, but Harrisse thought the earlier voyage must have been the discovery voyage. However, the ship *La Garza* did not participate in either expedition, nor did the records of either voyage reflect any travel near Bermuda; see Barreiro-Meiro, pp. 1-9. In 1970 Barreiro-Meiro discovered a document in the Archives of the Indies dating a New World expedition of five ships to 1505. One of the five vessels was the *La Garza* listed under the command of Juan Bermúdez. This was the only expedition in which Bermúdez commanded the ship *La Garza*, and thus this 1505 expedition is considered to be the voyage during which Bermuda was discovered; see Barreiro-Meiro, pp. 9-11.

2 It has sometimes been stated the pigs swam to the shore after a boat called *Bermudas* was wrecked. This explanation is found in Butler and Smith (who relied on Butler). Both men state this version of the events was “the greatest rumour,” among the English settlers, meaning it was the most frequently encountered explanation of the events (Butler, *Historye*, pp. 9-10 and Smith, *Generall Historie*, p. 173 and in the Barbour edition of Smith’s *Complete Works*, vol. 2, p. 345). However, the explanation is not in accord with the earlier Spanish sources. Indeed, the text of Oviedo, who was responsible for putting the pigs on the island, stated “...y llegué de ella estar en ocho brazas de agua y a tiro de lombarda de ella; determiné hacer saltar en tierra algunas gentes y dejar algunos puercos vivos que yo traía en la nao para el camino, porque se multiplicasen...”. Translated as, “...and I arrived at her [that is, Bermuda] being in eight fathoms of water and at a lombard’s gun [a kind of rifle] shot from her; I determined to make some people disembark onto land and leave some live pigs that I brought on the ship for the trip, because they might multiply...”; see Barreiro-Meiro, pp. 1-2, with the text quoted on p. 2. Clearly, this explains the pigs were intentionally placed on the island. Further, since the Oviedo text is the first chronicle to mention the discovery of the islands by Bermúdez, it has sometimes been suggested Bermúdez returned to the islands and participated in the 1515 expedition, when the hogs were released. In fact, there is no evidence that Bermúdez was part of the 1515 expedition.

3 Craven, “Introduction,” v. 17, p. 182.

Note: For geographical places discussed in the text, refer to the map of Bermuda on page 2491.

account of the ordeal by William Strachey stated "...For foure and twenty houres the storme in a restlesse tumult, had blowne so exceedingly, as we could not apprehend in our imaginations any possibility of greater violence, yet did wee still finde it, not onely more terrible, but more constant, fury added to fury,...."⁴ During this episode the *Sea Venture* was separated from the small fleet. On the third night the ship came upon the Bermuda Islands, which were then known as the Bermoothes or the Hogge Islands, although sailors called them the Islands of the Devils because of the coral reefs, shoals and rocks jutting out of the ocean. The *Sea Venture* became lodged between two rocks about three-quarters of a mile from shore. The 150 men, women and children on board were forced to abandon their ravaged ship, transferring themselves and all their remaining possessions onto the ship's two landing crafts, a longboat and a skiff. They sailed to what is now the island of St. George where they found an abundance of food including turtles, fish, fruits, berries, and hogs. It was stated that on their first day ashore the crew only needed half-an-hour to catch enough fish to feed everyone.⁵ During their stay on the island the hurricane survivors conducted several hunting expeditions to obtain hogs. Using a dog that was on the ship, a hunting party could round up a herd of 30 to 50 hogs within a week to supplement their food supply.⁶ The hogs were so important that an illustration of the herding of the hogs was added to the 1609 map of Bermuda made by the shipwrecked crew; also, a poem was written about the hunt by one of the passengers, Robert Rich.⁷

Over a period of about nine months the crew constructed two new boats, the 80-ton *Deliverance* and the 30-ton *Patience*. The boats were completed in April and soon thereafter, on May 10, 1610, the crew and passengers finally departed for Virginia, leaving two men behind, Christopher Carter and Edward Waters, to insure the British claim to the islands. The *Deliverance* and the *Patience* arrived at Jamestown on May 21st bringing bacon, pork, turtles and fish to the starving colonists. About a month later, on June 19, 1610, George Somers set sail from Jamestown on the *Patience* returning to Bermuda for additional provisions. However, when the *Patience* departed Bermuda, Admiral Somers, who was ill, remained behind. A crewman named Edward Chard elected to stay with Somers, as did the two current Bermuda residents and former crewmates, Carter and Waters. Somers battled his illness throughout the summer and fall, dying on the island on November 9, 1610.⁸ The place where Somers died was named St. George's Town, in honor of his patron saint.

The administration of Governor Moore and the use of credit

A number of the shareholders in the Virginia Company thought it would be profitable to start a subsidiary plantation in Bermuda. We learn in a letter dated February 12, 1611/12, from John

4 Lefroy, *Memorials*, vol. 1, p. 23.

5 Wilkinson, *Adventurers*, pp. 43-52; for William Strachey's comment on the fish see p. 46.

6 Strachey in Lefroy, *Memorials*, vol. 1, p. 36.

7 Wilkinson, *Adventurers*, an unnumbered plate between pages 46 and 47 illustrates the hunt from the 1609 map and includes an edition of the poem on the hunt. Rich's family was a principal shareholder in Virginia and Bermuda; his older brother Nathaniel held significant stock in the Virginia Company and then in the Somer Islands Company. Robert Rich, being the younger brother in the family, did not inherit the family estate and therefore was making the trip to Jamestown to oversee the family interests in the area. However, he saw opportunities in Bermuda and spent several years on the islands, strengthening his family holdings. The Rich brothers were allied with their first cousin, also named Robert Rich, who, in 1619, became the second Earl of Warwick. In the London administration of the Virginia Company, and later in the Somer Islands Company, the Warwick group was allied with Smythe group. Thomas Smythe headed the Virginia Company from 1609 until 1619 and headed the Somer Islands Company from 1616 until 1621 and then again from 1623 to 1625.

8 Strachey in Lefroy, *Memorials*, vol. 1, p. 47; Lewes Hughes, [contemporary sources spell his given name as Lewes but modern works use the form Lewis] in his 1621 pamphlet, *A Plaine and True Relation*, page A₃ verso; and Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, pp. lxx-lxxi.

Chamberlaine to Dudley Carlton, the British Ambassador to Venice, that it had been suggested Bermuda be renamed Virginiola, but after some discussion the shareholders agreed on the name Somer Islands.⁹ This is the form of the name as listed in Chamberlaine's letter and is the form later used in the 1615 charter issued by James I. However, as the namesake was George Somers, various forms of the name were used throughout the history of the plantation; among the numerous forms were Somers Island, Somers Islands, Sumer Island or the singular or plural of island or iland with either Summer, Summers, Sumer or Summers.

Preparations for colonization continued throughout the winter and into the spring, then, on April 27, 1612, the ship *Plough*, under the command of Captain Robert Davis, departed England for the Somer Islands. On the afternoon of July 11, 1612, the vessel arrived in St. George's Harbour, Somer Islands, with a contingent of sixty settlers and the first governor of the islands, Richard Moore. Once there were colonists to be supervised, the London shareholders quickly realized it would be more efficient for the administration of the Virginia Company to distinguish this subsidiary venture from the Virginia Plantation. Consequently, in November of 1612 a group of 118 members of the Virginia Company purchased the rights to the Somer Islands from their fellow Virginia Company stockholders for £2,000, effectively making the new plantation a separate entity within the Virginia Company.

Based on the experience of Jamestown, it was understood that an investment of money and manpower would need to be expended on developing and protecting the plantation before any profits could be expected from farming cash crops on individual lots. Governor Moore, a master ship carpenter by trade, would lead the people in constructing houses and in creating an infrastructure of pathways and roads.¹⁰ Also, boats were needed to move between the islands. Fortifications were necessary both to repel attacks by Spanish ships as well as to protect the colony from English, Dutch and French privateers or pirates. Indeed, under Moore, the foundations were laid and construction initiated for eight of the ten forts that protected the various harbors.¹¹

In February of 1613 the British learned a Spanish fleet was preparing to sail from Cadiz. The fleet was accepting Irish, Scottish and Dutch sailors but they were excluding English. It was rumored the fleet was to sail to Bermuda to advance the Spanish claim to the islands. The London Adventurers learned of this report and quickly sent the *Elisabeth* to the colony warning Moore to prepare his defenses against a possible Spanish attack. The ship also brought thirty more settlers and the first resupply of provisions. Later, in March of 1614, two Spanish ships were spotted heading into the harbor. Two shots were fired at the Spanish vessels and they departed. Although the colonists considered this an attack that had been successfully repelled, modern historical investigations into Spanish accounts of the incident have uncovered that the Spanish captain was simply curious and had no intention of attacking.¹² However, this episode convinced the shareholders and the colonists that they needed to expend significant energy on fortifications and defense.

In addition to construction projects the plantation needed to produce food for the colony. Therefore, some colonists were assigned to clear land owned by the company and plant corn, while others were required to hunt or fish. These essential foods were held in the company storehouse along with the supplies sent from London in the resupply ships; the items were

9 Craven, "Introduction," v. 17, p. 194 and Lefroy, *Memorials*, vol. 1, p. 57.

10 During this period infrastructure development was limited to the undistributed land held in common by the stockholders, called the "General."

11 Butler, *Historye*, pp. 17-47, Smith, *Generall Historie*, pp. 177-81, and in the Barbour edition of Smith's *Complete Works*, vol. 2, pp. 335-37 and 353-59.

12 Wilkinson, *Adventurers*, pp. 61 and 64-66.

distributed to the settlers under the authority of the governor.¹³ In June of 1613 the ship *Martha* arrived at St. George's Town bringing supplies and an additional 60 colonists, thus within a year the population had grown to 150 inhabitants.

One-quarter of the entire Somer Islands plantation was to be held in common as company land, while the remaining three-fourths was to be surveyed and distributed to shareholders. The common lands, called "the generall," consisted of the populated areas at the eastern end of the islands including St. George's and St. David's Islands as well as the smaller islands surrounding Southampton Harbour (currently know as Castle Harbour). About five years later, a portion of Hamilton parish located along the shore of Southampton Harbour, including Tucker's Town, was designated as common land. Basically, the entire main island, often simply called the "Maine," excluding the common land in Hamilton parish, was to be divided into lots and distributed to shareholders.

The first settlers lived together on the company owned land in St. George's Town on St. George's Island in the extreme northeast of the harbor. Each man was assigned a house and a half-acre of land for a vegetable garden, with a full acre of land for married men. All the settlers understood they would be required to work on municipal projects, either as construction laborers, farmers, hunters or fishermen. Their efforts were directed towards protecting the colony, feeding the inhabitants and creating an infrastructure of buildings and roads in St. George's Town. Also, to a lesser extent they conducted expeditions searching for natural treasures such as pearls and ambergris¹⁴ as well as experimenting with silk, tobacco and other products to discover the cash crops with the greatest profit potential.

Since the shares on the "Maine" were not yet surveyed or allocated, there was little opportunity for individual farming. Public projects provided one of the few opportunities for employment during the early years of the colony under Governor Moore. During the first two years most adult male colonists regularly worked at these municipal tasks.¹⁵ Drums would sound at daybreak signaling that workers were to report to the harbor.¹⁶ The assembled laborers would recite their morning prayers and then be sent to an assigned job where they worked until 9:00 AM. The workers were then allowed six hours to eat, rest and cultivate their garden. At 3:00 PM they had to report back and work for the company until sunset. In return for this work the laborers were to be paid by the company.

13 Craven, "Introduction," v. 17, pp. 320, 328 and 329; also see Butler, *Historye*, p. 77 where it is specifically stated in reference to Governor Tucker that he "...caused the shyps that came with him to be vnladen, and their ladeinge to be layd up in the publick store; he from thence distributed it to his worckmen in generall."

14 Ambergris is a waxy substance originating in the intestine of the sperm whale. When exposed to the air it turns light gray or yellow; it hardens and floats to shore. Ambergris was used as a fixative in making perfumes since it prevents a fragrance from evaporating. The three Englishmen on St. George's Island when Moore arrived in 1612 had discovered what Butler called "...the goodlyest and greatest peece of Amber-Grece that the world is knowen euer yet to have had in one lump" (Butler, *Historye*, p. 18) and which Norwood estimated "to the value of nine or ten thousand pound sterling" (Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxi).

15 From July of 1612 through 1614 most colonists remained at St. George's Town working for the company, with a few notable exceptions such as the Rich family plantation on the opposite end of the "Maine," in the parish of Southampton. However, the extraordinary influx of colonists throughout 1614 greatly stressed the colony's limited resources. This situation caused some colonists to temporarily settle or "squat" on the unallocated shares as subsistence farmers, rather than live in St. George's Town working on company projects.

16 Actually the drums were part of the ceremony for the changing of the guard. The twelve-man guard (increased to 20 in 1621) came on duty at 8:00 PM and retired at daybreak. Both the start and the completion of the watch were ceremonial events with drum rolls. See Craven, "Introduction," vol. 17, p. 442.

In the commission given to Moore by the Virginia Company, dated April 27, 1612, which was issued just before his ship departed for the Somer Islands, item four stated:

4. Ffor the better sattisfacon and assurance of all such prsons as shall be imployed for us in this plantacon, that we intend not to make vse of these labors for our owne private benefitt to neglect there publique profit; wee do hereby ordaine that such prsons workmen or labourers as shall at any tyme be imployed by you for our business in the saide Plantacon, you shall give unto them such reasonable day wages as in your discretion you shall esteeme them worthie to haue deserved; soe that exceed not xxd for a workman and 12d for a labourer, for wch purpose by the next supplie there shall be a Coyne sent unto you, wth all convenient opportunitie, togeather wth the rates and value thereof And in the meane time to cause true notes to be kept of whatsoeuer shall growe due to any for there said day labor, as also for all pruisions delivered them out of the Store at such reasonable rats [rates] as you shall thinke fitt.¹⁷

Thus, even before the first boat of colonists departed England, it had been decided to supply the colony with coinage. Unfortunately, the coinage was not forthcoming, therefore a ledger was kept recording each laborer's wage credits, which were redeemable for supplies at the company storehouse.¹⁸

The storehouse held all the Company produced food and drink as well as the food and manufactured goods delivered by the resupply or magazine ships from London. All inhabitants were given an allocation of food and clothing from the store, which they supplemented with vegetables grown in their personal gardens and any other items they could obtain by farming, hunting or fishing when they were not working for the company. In return for the work they performed for the company the settlers were paid by being assigned store credits. The credits were probably designated in monetary units since the governor's instructions spoke in terms of a maximum daily wage being 20d for a worker, who was probably a skilled craftsman, and 12d for a laborer, who was probably unskilled. These credits could then be used to purchase what the Moore commission terms "pruisions" (that is, provisions). These would primarily be manufactured goods but could also include other items imported from England and sold at the storehouse. Among the imports most often requested by the colonists were metal tools such as axes and fish-hooks; also frequently requested were cloth, canvas, thread and shoes as well as less practical items such as large quantities of liquor (especially the liquor called *aqua vitae*).¹⁹

The London investors planned to purchase provisions for the Somer Islands from part of the profits to be obtained out of the colony. Expecting riches similar to the gold being extracted by the Spanish in the New World, the Somer Islands investors had anticipated immediately harvesting numerous natural treasures. They expected to find large quantities of ambergris lying on the shores. Also, they naïvely thought diving for pearls and hunting for whales would be simple tasks. They believed profits from these enterprises would eventually be supplemented with a regular annual income from the production of valuable products including silk and tobacco. However, there were not as many natural treasures as anticipated and those that were available proved far more time consuming and costly to extract than had been thought, thus there were scant profits during these early years. Therefore, the company had to invest additional capital to supply the colony. In order to expend as little additional capital as possible, the company tried to keep expenses down by sending over a minimal quantity of supplies.

¹⁷ Lefroy, *Memorials*, vol. 1, p. 59.

¹⁸ Craven, "Introduction," vol. 17, pp. 324–30, especially p. 328.

¹⁹ See various letters in Ives, *The Rich Papers*, including pp. 31, 45, 77–78, 204 and 305. For other examples see the index under supplies on pp. 412–13.

These supplies were distributed out of the storehouse by the company quartermaster, called the clerk, at prices set by the governor.²⁰ Since the company had a monopoly, there was no competition. Outsiders were not permitted to sell products without the express permission of the governor. Precisely what price level the company set for items in 1613 is unknown. In a letter of October 23, 1620, the prices were termed as “cutt throate”²¹ and I suspect pricing under Moore was no different. Most likely prices were set so that the colonists would need to expend all of their outstanding credits (or just about all or maybe even slightly more than all their outstanding credits) to purchase whatever items had been supplied to the store. Thus when the store was empty, so were the colonists’ pockets (or, in this case, their credits). In this manner the company was able to afford to employ, and exploit, the colonists in order to take the first steps toward building an infrastructure for the new colony.

With a colony finally established in the Somer Islands, the London shareholders anticipated their private land allocations would be forthcoming. They were anxious to begin planting a cash crop of tobacco and derive a return on their investment. Therefore, several of the wealthier shareholders began recruiting individuals who were willing to travel to the colony to work the land as tenant farmers. In June of 1613 a surveyor named Master George Bartlett arrived in St. George’s Town on the ship *Martha*. He was charged with setting the property boundaries for the farms on the “Maine” so the land could be settled and cultivated. Governor Moore suspected Bartlett was a company agent sent to spy on him, thus the governor remained cordial but aloof. Bartlett realized problems were developing and so abandoned his task, returning to London five weeks later when the ship *Martha* made her return voyage.²²

The London investors proposed sending Bartlett back to the Somer Islands to make the survey, therefore they continued with their plans to send over more colonists. During 1614 the ship *Elizabeth* returned to St. George’s Town with forty passengers, two months later the *Blessing* brought 100 settlers and two days later the *Starre* landed with an additional 180 colonists. Just two weeks later the *Margaret* docked at St. George’s Town as part of a convoy with two frigates, the *Thomas* and the *Edwin*, bringing a further 160 settlers; among the passengers was Master Bartlett, once again returning to make the survey.²³ In a period of less than three months a colony with a population of 150 had to assimilate an influx of 480 new settlers!

20 Butler used the title of clerk for the person who distributed provisions during the Moore and Tucker administrations. This was the period when the company paid for and distributed goods to the colonists based on the value of the work the colonists provided to the company. See Butler, *Historye*, p. 44, quoted below at footnote 31, for the use of “Clearck of the Publick Store.” That term was also used in Butler on p. 58 in relation to a newly appointed clerk to supervise the supplies received from the *Edwin* in 1615. Also, Wilkinson stated John Collabar, who was a Counsellor in 1612, held the title clerk of stores (Wilkinson, *Adventurers*, p. 399). The term Cape merchant was used by Butler for an individual who acted as an agent (called a factor in the colonial era) for London company shareholders who personally financed, brought over and sold supplies for tobacco. For the term Cape merchant see Butler, *Historye*, pp. 69-70 and footnote 1, and also, pp. 75 and 97, referring to Tucker as a former Virginia Plantation Cape merchant. The term is also mentioned in documents quoted on pp. 184 and 210 as well as in Butler’s text on pp. 267 and 272.

21 Ives, *The Rich Papers*, Governor Nathaniel Butler to Nathaniel Rich, p. 191; also, pp. 178-79 in a letter of March 15, 1619/20, from Butler to N. Rich, “Ther is not scarce a thought (as you well knowe) amoungst the Company of sendinge us any shiypinge from England above once a yeare, and then for our Tobacco and perhaps to bring us (scarce one quarter of the) necessaryes which the Country extremely wanteth, and at such rates as, to speake truly and plainly, will ever keepe them poore if not miserable.” Again, in a petition of grievances from October of 1622 it states, “Wee are pinched and undone by unreasonable rates of necessary clothinge and other goodes, for notwithstanding that our Tobacco, our only money, is by the Adventurers valued at a meane rate heere [*at two shillings six pence the pound, yet their owne commodities sent ouer hether are by themselues pitched at what prize [i.e. price] themselues please, and so sold here*], viz. Salt, six shillings the Bushell; Vinegare at three poundes of tobacco the gallon; Oyle, Eight shillings the Galon; Aquavitie, three poundes of tobacco the Galon, and that without all alloweance of leakage; weareinge cloathes also, and all other things, being answerably prized [priced].” (Ives, *The Rich Papers*, pp. 238-39 and Butler, *Historye*, p. 295 for the bracketed italic section from the original that is missing in the copy transcribed in Ives.)

22 Butler, *Historye*, pp. 28-29.

23 Butler, *Historye*, p. 36, Smith, *Generall Historie*, pp. 179-180 and in the Barbour edition of Smith’s *Complete Works*, vol. 2, pp. 355-56, Craven, “Introduction,” vol. 17, pp. 330-32 and Wilkinson, *Adventurers*, p. 61.

Naturally, this massive increase in population caused several problems, stretching the food supply and manufactured provisions to the limit. The rapid population growth, coupled with an invasion of rats in 1614²⁴ that had damaged the corn crops, caused a serious food shortage. Many colonists contracted a disease that Norwood called "the Feages," which caused extreme weakness.²⁵

During this period of scarcity, the company could no longer provide food for the laborers. Thus most workers, with the exception of some skilled craftsmen such as bricklayers, masons and carpenters, were released from their jobs. They were told to "practice their best endeavours, and to provide for themselves."²⁶ Most were forced to abandon St. George's Town and take up residence elsewhere. Several fished or hunted in nearby areas on St. George's Island, while others moved onto open land on the "Maine" surviving from food they grew as subsistence farmers. Once again, Master Bartlett did not make a survey. Governor Moore was uncooperative and even intimidated Bartlett. During this difficult period Moore was not willing to issue Bartlett supplies or personnel. Thus Bartlett returned to London on the *Edwin*, bringing news to the shareholders of the desperate situation in the colony.²⁷

In March of 1615 even more drastic measures were required. A total of 150 of the "most ancient, sick, and weake" colonists were sent to forage sea birds and catch fish on Cooper's Island. However, so many birds were captured and eaten that problems developed. Butler stated that after some weeks of overeating "then sodenly [suddenly] followed a generall surfettinge, much sicknesse, and many of their deaths."²⁸ Therefore, it was decided to transport the group to the opposite side of the main island to Port Royal, which was the former name for the eastern portion of the parish of Southampton. When it became obvious the colonists would starve at Port Royal, the group was brought back to St. George's Town. The women and children returned by boat, while the men were required to walk the twenty-mile distance across the main island. Although a number of the relocated colonists died, most survived the ordeal. Reverend Lewis Hughes accompanied the colonists and wrote an account of the experience.²⁹

In response to the desperate need for additional food supplies to feed the returning colonists, Governor Moore expanded the fishing expeditions so that during this period, in the words of Butler, "...ordinarily 150 and sometimes 200 great fishes are brought home in a daye..."³⁰ Indeed, so

24 Daniel Elfrith was a local pirate who worked for Sir Robert Rich, the future Earl of Warwick and a major stockholder in the Somer Islands Company. Elfrith sold Governor Moore a shipment of Spanish grain that contained rats. The rats proliferated, spreading from island to island. They were finally controlled during Governor Tucker's administration by a combination of cats, poison, traps, some burning of wood land and an exceptionally cold winter that reduced the corn crop and thus limited the food supply available to the rats. See, Hughes, *A Plaine and Trve Relation*, pp. B₄recto – B₄verso and Craven "Lewis Hughes' *A Plaine*," p. 87; also, Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, pp. lxxii-lxxiii and lxxiv-lxxv; Butler, *Historye*, pp. 34 and 90-92 and Wilkinson, *Adventurers*, pp. 67 and 107. For background on Elfrith see, Pargellis and Butler, "Daniell Ellffryth's Guide," pp. 273-76.

25 Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxiii. Norwood stated "...a disease we called the Feages, which was neither paine nor sickness, but as it were the highest degree of weaknesse, depriuing vs of power and abilitie for the execution of any bodily exercise, whether it were working, walking, or what else." Also see Craven "Lewis Hughes' *A Plaine*," p. 79. Dr. Wilkinson, a physician, suggested "the Feages" may have been "scurvy, perhaps with beri-beri also" (Wilkinson, *Adventurers*, p. 70).

26 Butler, *Historye*, p. 40.

27 Butler, *Historye*, pp. 36-37 and 40.

28 Butler, *Historye*, p. 42 and Craven "Lewis Hughes' *A Plaine*," pp. 79-80. Butler relied on Hughes as his source for this event. Hughes detailed how the colonists captured and ate numerous birds. However he did not mention that any of the colonists died, just that "Mr. Moore then Governour, fearing that their over eating themsleves, would be their destruction, did remove them from thence to Port Royoll."

29 Butler, *Historye*, pp. 41-43; Hughes, *A Plaine and Trve Relation*, pp. B₁recto - B₁verso and Craven "Lewis Hughes' *A Plaine*," pp. 79-80.

30 Butler, *Historye*, p. 43.

many fishhooks were needed that older, rusty swords were delivered to the blacksmith to be turned into hooks. Finally, after several months of deprivation, the ship *Welcome* arrived with supplies. Sacks of meal were immediately distributed to the populace, who as Bulter stated, "...for many monethes before had seen noe [no] bread." Bulter went on to explain, "...the rest of the prouisions he [i.e. Moore] causeth also presently to be vnshypped and commits them to the charge of the Clearck [Clerk] of the Publick Store."³¹ By the summer of 1615 the famine was over. In the words of Richard Norwood, "The extremitie of our distresse beganne to abate."³² Many, but not all, of the colonists returned to St. George's Town, since some remained on the "Maine." Indeed, even a few of the Port Royal contingent chose to remain behind and did not return to town.³³

There was reason for optimism. The famine was relatively mild and short-lived. Unlike the disastrous famines and diseases at Jamestown, that killed ninety percent of the settlers, far fewer had died in the Somer Islands. Based on the population figures given by Norwood, the death toll for the famine and its aftermath was probably in the vicinity of fifteen percent.³⁴ Further, a beginning had been made in colonizing and farming the main island, even though a survey had not taken place. Some shares were being farmed by subsistence farmers, while a few substantial shareholders had independently begun cultivating larger plantations, most notably the Rich family estates discussed below. It was clear the land had potential. A letter written by the Reverend Lewis Hughes on December 21, 1614, to encourage further investment in the colony, had been sent to England and was printed as a pamphlet in 1615. The pamphlet spoke of the promise of silk, figs and several other cash crops especially tobacco. Hughes suggested the colony could grow corn that was "very good, large and faire, and more hearty and strong then our English wheate." He explained the climate was much milder than in England and suspected that was the reason there were no contagious diseases in the islands. As to farming Hughes related, "The earth is very fertile, and so mellow and gentle, as it needeth neither plowing, nor digging, ... men shall liue heere in much ease..."³⁵ Investors were still hopeful and saw great potential in the Bermuda adventure. Within three years a basic infrastructure of buildings and forts was well underway and even after factoring in the famine deaths, the population had grown from 60 in 1612 to over 500 inhabitants by mid-1615, far exceeding the population of the Virginia Plantation.³⁶

31 Butler, *Historye*, p. 44.

32 Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxiv. The full quote is: "The extremitie of our distresse beganne to abate a little before Master Moores time of Gouverment was expired, partly by supplies out of England, of victuall and prouision for fishing, and partly by that rest and libertie we then obtained, the Country being fortified."

33 Butler, *Historye*, p. 42.

34 When the Governor designate of Virginia, Sir Thomas Gates, arrived in Jamestown on May 21, 1609, he found only 60 of the 600 colonists had survived the first three winters! Precisely how many colonists died during the famine in the Somer Islands is not known. Overall, possibly as many as 100 individuals may have perished during the famine and its aftermath. Norwood estimated the population at about 600 before the famine, which he stated was "much diminished" after the famine (Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxii). He later estimated the population during the administration of Governor Tucker at 500. Norwood explained that few individuals came over during Tucker's time, so the decrease of 100 would account all those who died during the famine as well as those who died or left the colony during the administration of Tucker, with some factor to account for births and a few new colonists. Norwood further stated an additional 500 colonists arrived with Governor Butler in October of 1619 bringing the population up to 1,000. See, Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, pp. lxxvii-lxxviii. On Gates at Virginia see, Edmund S. Morgan, "Labor Problem," p. 595.

35 Hughes, *A Letter Sent into England*, unpaginated, citations and quotes from signatures, B₂verso, B₂recto and B₂verso. In discussing grain Hughes compared Somer Islands' corn to English wheat. Few Europeans had seen corn, which was a native American plant. Butler explained multi-colored Indian maize was the standard grain grown in the Somer Islands because wheat and other "grasse" did not grow well. On corn production in the Somer Islands see Butler, *Historye*, pp. 3 and 281-82.

36 Craven, "Introduction," vol. 17, p. 447 and Craven "Lewis Hughes' A Plaine," p. 58, footnote 7, where the population of the Virginia Plantations is listed as 351 in 1616 and at about 400 by 1618. In the "Lewis Hughes" article Craven estimated the Somer Islands population at 600 in mid-1615 but later in his "Introduction" revised his estimate downward somewhat, to account for the famine deaths. Thus, in mid-1615 it appears the Somer Islands had a population of over 500, while, at that time, the Virginia Plantation had less than 351.

The charter of 1615

This subsidiary venture within the Virginia Company was growing rapidly and was deemed to be significant enough to become a separate enterprise. To that end all the lands and rights purchased from the Virginia Company in 1612 were transferred to the king as a preliminary step towards obtaining a new and independent charter. On June 29, 1615, the new company was officially incorporated by a royal charter under the name of "the Governour and Company of the City of London for the Plantacon of the Somer Islands" which historians sometimes refer to as the Bermuda Company.³⁷ Among the privileges granted to the company was the right to issue coins. Regarding coinage the charter stated:

And wee doe further for us our heires and successors give and grant to the said Governor and Company and their successors that they shall and lawfully may establish and cause to bee made a Coyne to pass currant in the said Somer Islands betweene the Inhabitantes [inhabitants] there for the more ease of comerce and bargaining betweene them of such mettall and such manner and forme as the said Governor and Company in any of the said generall Courts shall limitt and appoynt.³⁸

Under the new charter the company was allowed to appoint a governor to rule over the colony for a three-year term. The governor had wide-ranging authority but was forbidden to act contrary to the laws of England. The company also received a trade monopoly in the islands, allowing them to collect a 5% duty on all imports or exports after an initial seven-year duty-free period. Also, the islands were apportioned as had previously been agreed. That is, a little less than 25% of the land was designated as the common or general property of the company, while the remainder was divided into eight parishes or sections (called tribes in contemporary sources) with fifty shares (that is, parcels of land) per parish at 25 acres per share. Each of the 400 shares sold for £12 10s, with a purchase limit of 10 shares per person, although with the consent of the stockholders at their quarterly meeting one could acquire up to 15 shares. A lottery had been held to determine the location of the parcels of each shareholder. However, the precise location of any individual lot could not be determined until the land had been surveyed. Investors planned to make a profit from harvesting cash crops on their shares, especially tobacco.

The shareholders wanted to attract more colonists to the islands to farm their lots. However, the lots would not be ready to be cultivated until the land had been surveyed. In the meantime, the settlers were to be employed on company projects. To this end the company offered to supply provisions and clothing to settlers in return for work. However, the new company did not want to pay wages, rather, they hoped to remunerate individuals with a portion of the profits from company ventures using a joint-stock model. All marketable goods from company whaling and fishing expeditions, timber harvests and related ventures, as well as any marketable cash crops, would be sent to England and sold. Profits would be divided between the company shareholders and the colonists. The money from the profits that were owed to the colonists would be used to purchase supplies that would be distributed to the settlers from the company storehouse based on the credits they had accumulated. As profits increased for the shareholders, the colonists would equally enjoy in the bounty.³⁹

37 Lefroy, *Memorials*, vol. 1, p. 87.

38 Lefroy, *Memorials*, vol. 1, pp. 83-98 with quote on p. 98. The general court refers to a meeting of the stockholders.

39 During the Moore administration, the quantity of goods shipped to the colony was based on what the shareholders felt was the minimum requirement to sustain the colony. Although the colonists may have expected the shareholders to send additional supplies as the profits from the colony increased, there was no provision that required the company to do so. In the new plan supplies to the colonists would rise or fall in relation to profits.

This plan required the colonists to wait quite a while for any remuneration. The fruits of their labor had to be shipped to London, marketed and sold, then the profits had to be divided, and the products purchased from the profits had to be shipped to the islands before the colonists would see any return. It was understood several colonists would prefer a weekly wage for their labor rather than the promise of future profits. Thus, it was deemed necessary that a supply of small change be delivered to the islands for that purpose.⁴⁰

The newly chartered company selected Daniel Tucker of Jamestown as the new governor for the Somer Islands Plantation. Tucker received his commission as governor on February 13, 1616, but he did not arrive in the islands until May 16th. It was stated in his commission in paragraph 24 that "...We doe accompt that all men that shall be employed in the generall are to be capable of this contentment by pffits raised out of there labours..." ["the generall" refers to the company owned land] and then went on in the next paragraph:

25. But yf any refuse and will not accept this contentment out of the poffits in that case we have appointed a base coyne wch we send rated wth our puisions, whereby you may give to such men there weekly wages when they worke, and as you shall find them to deserue, with wch coyne yt [i.e., that] shalbe lawfull and free for them to buy any puisions out of the Store or any ffishe corne tooles or any other thing in the Islands where they can gett the same And to that end you shall pclaime the said coyne to be currant to passe freelye from man to man only throughout the Islands and not otherwise.⁴¹

The text went on to specify if a large number of workers elected to be paid weekly with the base coinage, then the company would need to reduce the proportion of the profits being allocated to those workers electing to receive their pay from profits. However, to encourage workers to elect the profit sharing plan, the company stated "...one half of whatsoever shall be found that we have gained by the contentinge soe many wth base coyne, shall be freely imparted by vs to those that have willinglie yielded to take their salarye out of the pffits to make there dividents the better."⁴²

Contemporary references to Hogge money

From various sources it seems the base coin was indeed sent to the islands and that it was Hogge money. The most important source on this point is a detailed history of the colony covering the period 1609-1622 by Nathaniel Butler, who served as governor of the Somer Islands from 1619-1622. In his discussion of Tucker's first year in office Butler stated that Tucker

...enioine [enjoined] the people of the generallitie, which were resident with him at St. George's (being at that time about 150 persons) to seuerall kinds of labours, as some to cleare ground and sett corne, others to fall timber, hale [haul] trees, square and sawe them, the rest to plant vines and other fruicts brought with him out of England; and these labourours had certaine seuerall ouerseers sett ouer them in the nature of task-masters, and wer by breake of day to repayre [repair] to the towne's warfe at the sound of the drumme, and from thence to be disposed to their places of employment, and ther [there] to worck vntill nine of the clock in the morneninge; and in the afternoone, from thre vntill sunnes set [sunset]. Neither had they had any other allowance at that time for all this than meate, drinck, and clothes, with a certaine paye of base-money (deliuered vnto the Gouvernour by the Company), the which haueing a hogge stamp upon it on the one side

40 Craven, "Introduction," vol. 17, pp. 334-37.

41 Lefroy, *Memorials*, vol. 1, p. 113.

42 Lefroy, *Memorials*, vol. 1, p. 114.

(in memory it should seeme of the great number of wild swine found vpon the Ilands at their first discovery), was, in a scoff, tearmed by the people hogge money.⁴³

The coinage was also mentioned in the 1624 history of the Somer Islands by Captain John Smith, who relied heavily on Butler's manuscript as a source for his work. Smith stated that Daniel Tucker

...set every one was with him at Saint Georges, to his taske, to cleere grounds, fell trees, set corne, square timber, plant vines and other fruit brought out of England. These by their taske Masters by breake a day repaired to the warfe, from thence to be imployed to the place of their employment, till nine of the clocke, and then in the after-noon from three till Sunne-set. Besides meat, drinke and cloaths, they had for a time a certaine kinde of brasse money with a hogge on the one side, in memory of the abundance of hogges was found at their first landing.⁴⁴

Smith never visited Bermuda, but Butler was a contemporary resident and governor of the islands, with a detailed knowledge of the events and access to company records. From the Butler account it seems Hogge coinage was produced for and issued by the Somer Islands Company and that it first circulated during the administration of Daniel Tucker, who took office on May 16, 1616. Tucker's three-year term as governor did not expire until May of 1619, but he departed a few months early for London on the ship *Blessing* leaving Miles Kendall in charge.⁴⁵ On October 20, 1619, Captain Nathaniel Butler arrived in the islands on the ship *Warwick* as the newly appointed governor. Butler did not mention any deliveries of Hogge coinage in the long section of his manuscript describing his own administration, leading one to conclude the coinage emission did not continue beyond the Tucker years. Thus, from these sources we can surmise the coinage was emitted sometime after May of 1616 but before late 1618.

Butler mentioned the coinage in his discussion of Tucker's first year in office, (May 1616 - May 1617). Indeed, several British ships arrived in the Somer Islands with supplies during 1616 including the *George*, which brought Governor Tucker to the islands; also the *Edwin*, the *Sea-Flower* and the *Hopewell* were in the Somer Islands that year. Unfortunately, the list of ships in the Somer Islands is incomplete because it is based on information extracted from extant sources, but it is significant to know there is no record of any ship arriving in the Somer Islands from Britain in 1617.⁴⁶ Thus, it appears likely the coinage arrived in the islands sometime during the first six months of Tucker's tenure, that is, between his arrival on May 16, 1616, and the end of 1616.

Archeological evidence is in accord with the written sources. One of the principal defensive fortifications in the islands was called King's Castle, located at the southern end of Southampton

43 Butler, *Historye*, pp. 75-76.

44 Smith, *Generall Historie*, book 5, p. 183 and in the Barbour edition of Smith's *Complete Works*, vol. 2, p. 362.

45 Tucker certainly continued to hold the office of governor through November of 1618, since there is a proclamation by Tucker dated November 24, 1618 (Lefroy, *Memorials*, vol. 1, p. 133). Precisely when Tucker stepped down is unclear. In a letter from Miles Kendall to Nathaniel Rich, dated December 12, 1618, Kendall said he was the governor at that time, for he stated "...my honest Care and true Indeavour for the peoples gubernation [that is, for governing the people] as I am now resident in that place [that is, now holding the office of governor] untill wee heare further newes from England againe." (Ives, *The Rich Papers*, p. 119). Richard Norwood wrote that Tucker departed in December of 1618; see Ives, *The Rich Papers*, p. 375 and Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxvii. However, Butler stated that Tucker sailed on the ship *Blessing*, which departed from Bermuda in early 1619; see Lefroy, *Memorials*, vol. 1, p. 722. Possibly Tucker stepped down as governor at the end of November or very early in December, certainly before December 12th, but did not depart the islands until early in 1619.

46 Lefroy, *Memorials*, vol. 1, p. 721. Only three ship arrivals are listed in 1617. A local ship, the *Neptune*, returned from a whaling expedition. The *Hopewell* returned; it had arrived from England in 1616, unloaded its cargo in the Somer Islands and then proceeded to the West Indies. It was now stopping once again in the Somer Islands before finally heading back to England. The only other boat arrival recorded in 1617 was a caravel with a crew of twelve men that had been sent to Virginia.

Harbour on a small island in the main entrance to the harbor. Construction of the fort began under Governor Moore with work continuing under Governors Tucker and Butler. The fort was excavated under the direction of Edward Harris, Director of the Bermuda Maritime Museum and Professor Norman Barka from the Department of Anthropology of the College of William and Mary in Williamsburg, Virginia, during the summers of 1993, 1994 and 1996. Over the three summers nineteen specimens of Hogge money were discovered in a ditch. The ditch, originally dug sometime between 1612 and 1621 as a defensive barrier, was about five feet wide and six feet deep. It was located behind the castle wall at the back of the upper battery and extended over most of the length of the peninsula on which the castle is located. Once the ditch no longer served a defensive purpose it was turned into a latrine and refuse pit until it was filled up, probably in the 1650s. The coins were located in a section of the ditch near the castle in a layer that could be dated to before 1650.

Possibly during the early history of the colony the discovered coins had been lost or were inadvertently thrown out with the trash. The coins were not discovered together as a hoard, so we can discount the possibility that an individual buried them for safekeeping. Precisely how and when the coins ended up in the ditch is unknown. In 1993 a shilling and a sixpence were uncovered, in 1994 thirteen sixpence were found and in 1996 two shillings and two sixpence were unearthed. The finds do not help us in determining an emission date, because we do not know how long the coins may have circulated before they were lost. Nor do we know precisely when the coins were lost, since all that the archeological evidence can state is that the ditch first dates to sometime between Moore's construction at the castle in 1612 and Bulter's construction in 1621. It is possible the coins ended up in the ditch before the area became a refuse ditch or after that date. Further, we do not know when the ditch was converted into a refuse pit. All one can say is that the deposit must date to sometime before the 1650s, when the pit was filled. However, it is interesting that the written sources connect the coinage with payments to workers employed on company construction projects and the largest and only controlled find of these coins has been at an important early company construction site.⁴⁷

Based on the sources, it appears the coinage was probably emitted sometime during the second half of 1616. Further, from the sources and the archeological evidence we can conclude the coinage was used to pay men working on company projects.

Hogge money was paid to day laborers and could be used to purchase supplies at the Somer Islands Company storehouse. The coins were actually tokens made of copper with a thin tin wash, giving them the appearance of silver, but with little intrinsic value. The weight ranges within the four denominations of the twopence, threepence, sixpence and the shilling have a wide spread because there are both thin and thick planchet examples, thus it seems unlikely the coins were issued or used by weight. Hogge money was accepted because it was issued by the Somer Islands Company and could be used to acquire provisions at their supply storehouse. This makes Hogge money similar to the contemporary token coinage of England issued by local merchants.

It seems quite likely the Somer Islands Company contracted for the production of Hogge coinage sometime between the time they were granted a royal charter on June 29, 1615, which authorized a coinage emission, and the issuance of Tucker's commission as governor on February 13, 1616. The wording in Tucker's commission was "we have appointed a base coyne wch we send rated wth our puisions." The use of the past tense "have appointed" suggests the coinage had already been discussed, approved and ordered. Furthermore, Tucker's instructions stated the company

47 Bermuda Monetary Authority, *The Coins of Bermuda*, pp. 31, 33 and 38-39; also see: Ziral and Jones, *The Insiders' Guide: Bermuda*, as of March 15, 2003, <http://www.insiders.com/bermuda/sb-history.htm>

assumed only a portion of the workforce would request payment in Hogge money. It was assumed some workers would accept the incentives offered by the company to take their payment through a profit-sharing plan. In 1616 the population of the colony was about 500 individuals, including women and children. It is probable the number of adult males was somewhere between 250 and 300. Some of these individuals were company officers, squatters or adventurers such as Rich or those who worked for the adventurers. The number of actual laborers resident in St. George's Town is not known but it may have been about 150. Possibly this is what Bulter meant when he stated that under Tucker "...the people of the generallitie, which were resident with him at St. George's (being at that time about 150 persons)..."⁴⁸ Since the company planned to use the coinage to pay weekly wages to only a portion of these workers, it is quite likely the company anticipated the coinage would be paid to a population of less than 100 workers. Thus, one could assume the quantity of coins ordered was rather limited. Indeed, only about one hundred specimens of all denominations are known to be extant. It is quite likely the limited size of the emission of Hogge money was unable to make a substantial difference in daily exchange. There are no contemporary documents that either mention or record an actual example of the use of Hogge money in daily transactions.

The coins were produced by placing a planchet between two dies and then striking the upper die with a hammer. In this process the upper or hammer die would be more likely to shatter since it received the force of the blow. Thus the hammer die needed to be replaced more frequently than the lower or anvil die. From the surviving coins there are generally twice the number of obverse varieties as there are reverse varieties, except in the case of the shilling where the ratio is reversed. This suggests the obverse die was usually the upper die and the reverse die was the lower die. From the current population of extant Hogge money, numismatists have identified one obverse shilling die and two reverse dies; four sixpence obverses and two reverses; one threepence obverse and one reverse and two twopence obverses and one reverse.⁴⁹ The higher number of sixpence dies suggests the sixpence was the denomination with the highest mintage, an observation borne out from the King's Castle site where three shillings and fourteen sixpence were discovered.

From the first settlement in July of 1612 through mid-May of 1616 the Somer Islands were a subsidiary venture within the Virginia Company. During this period company transactions were effected by converting work credits into supplies at the company storehouse. In May of 1616 Daniel Tucker, the first governor of the newly chartered Somer Islands Company, took control. Soon thereafter the Somer Islands Company issued Hogge money. In economic terms Hogge money was a short-term experimental method of paying for work on company projects. It was primarily meant to replace the older credit system for obtaining supplies at the company storehouse in St. George's Town. The coinage was offered as an alternative to the company preferred option of accepting a share of the profits. In this alternative the company would pay workers in Hogge money, then the workers would spend the coins at the company storehouse. The company could re-circulate the coins during the next pay period. Further, the company charter provided for the use of the coins in general commerce to purchase "ffishe corne tooles or any other thing in the Islands." There is no written evidence in the few remaining sources that proves the coins circulated in this manner. However, based on the very worn condition of most surviving specimens, it seems probable the coins did circulate. The extent of the circulation is difficult to determine, for all the surviving coins have been uncovered from the ground and therefore some wear can be attributed to corrosion.

48 Butler, *Historye*, pp. 75-76.

49 I am assuming the side with the hog and the denomination is the obverse and the side with the ship, frequently identified as the *Sea Venture*, is the reverse.

The opening of the “Maine” and the transformation of the Somer Islands economy: 1617-1618

As mentioned previously, the London shareholders, expecting an early survey of the main island, and anticipating the opening of their shares, sent a massive influx of new colonists to the Somer Islands in 1614. When the planned survey did not take place and the shares were not opened, the excess population caused significant problems. There simply was not enough food or other provisions nor were there adequate accommodations in St. George's Town for the new arrivals. This crisis compelled several people to prematurely occupy land on the main island, referred to as the “Maine.” From comments made by Richard Norwood after the completion of his land survey in 1617, we can infer that the colonists who left St. George's Town to reside in the “Maine” during the period before the survey, were basically squatters who practiced subsistence farming. They lived in temporary housing, usually primitive cabins or tents and only produced enough food to feed their families.⁵⁰

When supplies final arrived from London in late 1615, many colonists returned to St. George's Town. However, some colonists, especially some of the squatters who had moved to the “Maine,” did not return to town. Several incidents in Nathaniel Butler's history imply a number of people continued to live on the “Maine” after the crisis had passed and Governor Moore had departed for London. The six-month hiatus between the time Governor Richard Moore departed for London in December of 1615 and the arrival of Governor Daniel Tucker in May of 1616, was referred to by Butler as the period of the “rule or rather mis-rule of the six [governors].”⁵¹ Six different individuals each served for a month as the interim governor, indulging in excesses in what Butler called “a perpetuall Christmas.”⁵² During the term of John Mansfield, Minister Lewis Hughes spoke out against the governor. The governor pronounced that Hughes should be committed to jail and that the other minister, George Keith, should be called back from the “Maine,” to serve in St. George's Town in place of Hughes. Clearly this episode implies Keith was acting as an itinerant preacher for inhabitants of the “Maine.”⁵³ Butler also stated that during this period one of the governors paraded through the “Maine” seeking stashes of liquor. He also related that when the ship bearing the newly appointed company governor, Daniel Tucker, approached the islands, the interim governor contemplated resisting Tucker and sent trusted messengers “...into the Maine to grope the mind of the multitude.”⁵⁴ All of these episodes suggest a number of people continued to live on the “Maine” in the post-famine period.

Up to the Tucker administration no survey of the main island had been made. Most inhabitants of the “Maine” were simply squatters, settling on some undefined plot of land, trying to produce enough food to survive. They were not shareholders but laborers, hoping to one day become tenant farmers for company shareholders and be able to make some money for themselves and their shareholders by planting a cash crop.

50 Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxvii indirectly refers to the squatters stating that after the survey individuals “... They built for themselves and their families, not Tents or Cabins, but more substantiall houses : they cleared their grounds, and planted not onely such things as would yeeld them fruits in a yeare, or halfe a yeare: but all such too, as would afford them profit after certaine yeeres,...” The passage infers that previously individuals had lived in less substantial tents or cabins and cleared only enough ground to suffice in feeding their families. Also see Craven, “Introduction,” v. 17, p. 453.

51 Butler, *Historye*, p. 45.

52 The six were Charles Caldicot, Captain John Mansfield, Christopher Carter, Captain Miles Kendall, Thomas Knight and Edward Waters. See Butler, *Historye*, p. 47-75; Norwood, *Journal*, p. 56 and Wilkinson, *Adventurers*, pp. 73-76 and 399.

53 Bulter, *Historye*, pp. 48-56.

54 Bulter, *Historye*, pp. 67 and 72.

We have seen that George Bartlett did not receive the cooperation of Governor Moore and thus failed in two attempts to make a survey of the shares. Richard Norwood had traveled to the Somer Islands in 1613 to participate in a pearl diving venture, however he quickly discovered "...there were but few pearls, and amongst them very few that were precious and worth, no ways equivalent to the time and labour that must be bestowed about them."⁵⁵ With the failure of the pearl diving enterprise Norwood was planning to return to England on the next available ship when he was hired by a company employee named Mr. Berkeley to survey the coastline of the islands in order to calculate the total acreage of land in the colony. Norwood began the project in 1614 and completed it in December of 1615, just before Moore departed. For the next six months, during the rule of the six governors, Norwood earned a living by constructing boats. When Daniel Tucker arrived, the new governor urged Norwood to undertake a survey of the shares on the "Maine." In his *Journal* Norwood explained that he was reluctant to undertake this task because he had not been paid for his earlier survey of the coastline. He stated "I stood off and refused some two or three months because I was not paid for the survey of the country, for which we should have had 2d the acre by agreement with Mr. Berkeley."⁵⁶ However, Norwood finally came to an agreement with Tucker and in late August or early September of 1616 he began the survey of the "Maine."⁵⁷

Until the survey was completed only a few shareholders attempted to hire laborers to occupy and farm their lots for cash crops. One exception to the rule was Robert Rich. Robert Rich's older brother Nathaniel, with twelve shares, was a substantial shareholder in the Somer Islands Company and one of the most active in promoting the development of the islands. Robert Rich represented his brother Nathaniel as well as his cousin, Sir Robert Rich, who owned fourteen shares in the Somer Islands Company. In 1619, Sir Robert Rich became the second Earl of Warwick; one of the eight original parishes was named for him.⁵⁸ Altogether, with twenty-six shares, the Rich family owned more shares than any other family.

Robert Rich had been one of the original colonists who came over with Admiral Somers on the *Sea Venture*. We learn the Rich family attempted to settle the land and plant cash crops as early as 1615. Edward Dun was a tenant farmer working with Robert Rich for Rich's cousin, Sir Robert Rich. Dun wrote to the future earl on November 20, 1615, that he was residing with Robert Rich but that he had planted some corn and some tobacco on land that he guessed would be the land assigned to the future earl. He stated "Wee are as yet upon uncertainty, but as neare as we can gesse upon your shares."⁵⁹ Basically, the lottery had taken place back in 1612, so shareholders knew the general size and location of their lots in relation to other lots, but they had no specific points of reference from which to measure their boundaries.⁶⁰ One error that Robert Rich later regretted was that he constructed his house on land that ended up being owned by Henry Wriothesley, the

⁵⁵ Norwood, *Journal*, p. 53.

⁵⁶ Norwood, *Journal*, p. 58.

⁵⁷ Norwood, *Journal*, pp. 53-58 and introduction pp. xxxvii-xxxix.

⁵⁸ Originally the parish was called Mansell's Tribe for Sir Richard Mansell but it was renamed for Warwick after the survey. Currently there are nine parishes since St. George's is now a parish.

⁵⁹ Ives, *The Rich Papers*, pp. 3-4.

⁶⁰ On the lottery see Craven, "Introduction," vol. 17, pp. 346-47. The lots were to be 26 acres each, however, Norwood discovered there was not enough land so he reduced the lot size to 25 acres. This resulted in an unallocated section called the overplus. See Craven, "Introduction," vol. 17, pp. 455-56.

third Earl of Southampton and Baron of Titchfield.⁶¹ Two other shareholders occupying what they thought to be their lands and attempting to plant cash crops were Richard Morer who had six shares and Richard Chamberlin who owned three shares. Both were in Southampton, east of the area where Rich resided.⁶² Most of the London shareholders, without representatives in the islands, were unwilling to pay tenant farmers to clear and work land that might belong to someone else. This meant most of the Somer Islands colonists were not able to make agreements to work farm land during the period before the survey was completed.

It should also be noted tobacco was not a significant cash crop in the pre-survey era. During that period most company farming was directed toward producing food for the settlers, with some experimentation on a variety of potential cash crops. Indeed, the "first trial" of tobacco grown on company land was produced in 1613 but most of the crop spoiled because it was improperly cured. The next year a "small quantitie" was successfully produced and was sent to London in early 1615 on the *Edwin*.⁶³ Soon thereafter tobacco was being grown on the "Maine" at the estates of Rich, Morer and Chamberlin, as we have just seen in the November 1615 letter from Dun and as will be explained below in the Rich letter from 1617. However, the numerous squatters on the "Maine" were simply subsistence farmers. Until the survey was completed the majority of the land was not being farmed for cash crops, therefore, there was little tobacco available to be used as a means of exchange.

Although tobacco was scarce there is evidence that it was a desired commodity. At that time, private transactions were often conducted by bartering, with provisions being offered as payment. However, few colonists had any provisions to spare. Tobacco was seen as a promising money substitute that could be produced locally. Since it had a ready market in London, tobacco had an intrinsic value making it a payment that merchants and others would be willing to accept. A letter of Robert Rich from May of 1617 discussing the method of payment to be made to Richard Norwood for conducting his survey of the land, contains an example of the use of provisions for payment as well as the promise of the use of tobacco for payments in the near future.

In the letter Robert Rich wrote about several financial matters to his brother in London, Nathaniel Rich. It was understood that each shareholder was to pay Richard Norwood for the survey of his own shares of land at the rate of 5s per share surveyed, this would total to £3 or 60s for the twelve shares owned by Nathaniel. Rich stated, "I payd unto Mr Norwood in provicions to the sum of fifty

61 Wilkinson, *Adventurers*, pp. 109-110, Craven, "Introduction," vol. 17, pp. 374-78 and Ives, *The Rich Papers*, p. 21, especially footnote 15. Rich mistakenly settled on a twelve-acre tract opposite Buck Island, which actually belonged to the Earl of Southampton, rather than on his brother's shares of land, located a few miles to the east. The earl was well known as a courtier and as a patron of William Shakespeare. The most accurate location of the stockholders shares is found in the Norwood map printed in 1626 but reflecting share ownership as of 1622, reproduced at the end of this essay. The map divides the eight parishes into lots and numbers each lot. It also includes a key with the name of the owner of each lot and the number of shares on each lot; the key is titled "the names of the now Adventurer, viz. this yeare 1622 so neare as wee could Gather." In this map the Earl of Southampton has four contiguous shares identified as lot twelve in Southampton. Also, in Southampton lot nine represents three contiguous shares owned by Sir Robert, Earl of Warwick which are adjacent to the twelve contiguous shares owned by Nathaniel Rich, listed as lot eight. Sir Robert, Earl of Warwick, also owned the following: five contiguous shares in Warwick, that are listed individually as lots 16-20; two contiguous shares in Devonshire, listed as lot five and four contiguous shares in Hamilton, listed as lot 13. The map is in Ives, *The Rich Papers*, pp. 40-41 and as a loose foldout in a pocket on the inside back cover.

62 Ives, *The Rich Papers*, pp. 20-21. Of course, Rich was inadvertently residing on the wrong property! The Rich property was actually located on the Norwood map in Southampton as lot eight (Sir Robert) and lot nine (Nathaniel). Morer's six contiguous shares were listed on the Norwood map as lot ten, just west of the shares owned by Sir Robert Rich, the Earl of Warwick, while Chamberlin's three contiguous shares were listed as lot three, which was the fifth lot east of the property owned by Nathaniel Rich.

63 Butler, *Historye*, pp. 29 and 41 and Craven "Lewis Hughes' *A Plaine*," p. 78, especially footnote 5. This was the voyage that informed the Adventurers of the famine in the Somer Islands and on which Master Bartlett returned to London after failing to conduct a survey of the main island for a second time.

shillings.” He went on to say he would have paid the entire bill but he had no more provisions to spare and therefore he was asking his brother to pay the additional 10 shillings that was owed, “...if my provisions could have held out I would had satisfied him for the other 2 of your Shares...But I have assigned a bill...whereof you are to paye ten shillings for the 2 other Shares...” Regarding the other, smaller shareholders, Robert Rich stated, “Mr. Norwood is to have 5 shillings upon every share or els [else] two pounds of Tobacoe which Tobacoe I estimate to bee worth 5 shillings a pound.”⁶⁴ He then asked his brother to explain to the stockholders at the next company meeting in London that they needed “to satisfie hime [that is, Mr. Norwood] in mony, for there Shares are not supplied, therefore hee canot bee satisfied in Tobacoe unless it bee from your people and Mr Moreres and Mr Chamberlins...”⁶⁵ That is, since the shareholders had not made agreements with tenant farmers, the lands had not yet been occupied and farmed, thus those shareholders had no tobacco crops and therefore could not pay Mr. Norwood locally unless Nathaniel Rich or another shareholder with occupied lands paid the bills from the tobacco being grown by the tenants on their own lands.

Thus, we see in May of 1617, even the wealthy Rich family representative, Robert Rich, paid debts with commodities and had to ask his brother in London to pay the additional 10s owed, as he had no more provisions to spare.⁶⁶ Rich did not pay in tobacco because his tobacco crop would not be ready for harvesting until October and would then need to be cured. Several other properties on the “Maine” were as yet unoccupied or were just being occupied for the first time. Obviously there were no tobacco crops on those unoccupied or recently occupied shares, therefore there was no way to pay Mr. Norwood for his survey unless those with previously occupied land made the payment for the others. Basically, only the Rich family had the wealth on hand to pay Norwood. This is because Nathaniel Rich would personally send supplies from London for the upkeep of his lands. Other colonists did not have extra provisions and would need to wait until those with some tobacco could harvest their crop and pay the debt to Norwood, or the shareholders in London would need to pay the bill.

The stockholders understood the situation. As the survey was being completed in April of 1617 they paid their debt to Norwood for conducting the survey and immediately prepared to have their land cultivated. In some cases tenant occupation of the shares began once the specified shares had been surveyed but before the entire survey was completed. The colony had two growing seasons each year for corn and vegetables, there was a summer crop planted in March and harvested in July while a winter crop was planted in August and harvested in December.⁶⁷ Tenants who could settle on the shares before the survey was completed would be able to plant a corn crop for harvesting in July, the others would need to wait for the August planting. Additionally, both the tenants and the shareholders wanted to start a cash crop of tobacco. Tobacco took five months to grow and was harvested in October, so tobacco planting had to be underway during May. Realizing these planting deadlines, the tenants occupied the shares as quickly as possible in the

64 A standard company rate for Bermuda tobacco had not yet been established, but within a year the rate was set at 2s6d per pound, as is mentioned in a Rich letter of June 29, 1618 (Ives, *The Rich Papers*, p. 104, also see the comment on p. 238 at footnote 6 and Craven, “Introduction,” vol. 17, p. 355); however, the colonists kept trying to increase the price. In this early case Rich was hoping for a higher exchange rate.

65 The full letter is in Ives, *The Rich Papers*, pp. 20-21.

66 It should be noted Rich lived in the parish of Warwick, which is near the opposite end of the islands from the seat of government in St. George’s Town. Thus Rich did not have ready access to company provisions or to company laborers with Hogge coinage.

67 Norwood, in his *The Description of the Sommer Ilands* stated, “...Of this Corne, and diuers other things without either plowing or digging the ground, they haue two haruests euery yeare; for they set about March, which they gather in Iuly; and againe in August, which is ripe in December.” (Norwood, *Journal*, p. lxxx). Also see Craven “Lewis Hughes’ *A Plaine*,” p. 81.

spring of 1617. They cleared the land for cultivation, generally prepared the shares for farming and constructed their houses. Norwood stated that once the survey was made the tenants

...knew their businesse, and fitted their household accordingly. They built for themselves and their families, not tents or Cabins, but more substantiall houses: they cleared their grounds, and planted not onely such things as would yeeld them their fruits in a yeare, or halfe a yeare: but such things as would afford them profit after certaine years, & c. So that in short time after, euen before the expiration of Captaine Tuckers gouernment, the Country began to aspire and neerely to approach vnto that happinesse and prosperitie wherein now it flourisheth.⁶⁸

Generally, a shareholder would request a certain number of tenants and the governor would assign specific individuals to the shareholder. The London shareholder then made a five-year agreement with each tenant to equally split the profits on the occupied share. The tenants did the work and the shareholder provided the tools, food and clothing needed by the tenants. Such shares were called "supplied" shares.⁶⁹ Numerous agreements were made as the survey was underway. It is clear Governor Tucker made use of his office to help his friends and allies. Butler stated that when Norwood began the survey of the main island in late August or early September of 1616,⁷⁰ the new governor, Daniel Tucker, "...began at the same time to place some colony men on some of his especial friends' shares. He swore also certaine of the cheife men of the tribes to be baylies of every tribe; and appointed as many men as he was able for all supplied shares."⁷¹ By May of 1617 a significant number of settlers had become tenant farmers and had already moved from St. George's Island to the shares on the main island. They were building houses and planting their first crop of tobacco.

A result of the occupation and farming of the shares was that Governor Tucker had difficulty in finding workers for company projects. In fact, at the general assize (that is, the quarterly court meeting in the Somer Islands) of early May 1617, for the first time Governor Tucker was forced to order a "presse and levye" of the settlers on the shares to repair some forts. The number of workers needed was small so there were no significant protests. However, the governor continued to conscript farmers for four to eight week periods. In response to this there were several complaints. Lewis Pollard, who was bailiff of the parish of Pembroke, was reported as saying he would be put in irons before he would permit his planters to be conscripted for work on the forts. Similar statements were made by Robert Rich and both Rich and Pollard were brought up on charges and put in prison. By the end of 1617 there were several similar complaints.⁷² A letter of February 23, 1617/18, from two tenant farmers, Marmaduke Dando and William Smith, stated "We are greatlye opprest and trobled about the generall woork as in makeinge hye wayes [highways] and makeinge of forts and such bisneses for 3 or 4 weeks togeather, which is a great henderance unto us and such a hinderance that we shall not be able to raise anye profett by our labors."⁷³ Similarly, on March 10, 1617/18, Edward Dun complained in a letter to Nathaniel Rich that he was hindered in his farming due to "...9 weeks in workinge at the forts & makinge of highways."⁷⁴

68 Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxvii.

69 Craven, "Introduction," vol. 17, pp. 343, 353-56.

70 Norwood, *Journal*, p. 59 and Craven's introductory remarks on pp. xxiii-xxxi, especially xxviii. Also, Craven, "Introduction," vol. 17, pp. 194-95.

71 Butler, *Historye*, p. 77.

72 Craven, "Introduction," vol 17, pp. 452-53, 455 and 457-59.

73 Ives, *The Rich Papers*, p. 45.

74 Ives, *The Rich Papers*, p. 94.

There was a perceptible shift in the economy of the islands soon after the first significant crop of tobacco was harvested in October of 1617. Half of the first crop was sent to the shareholders in London and half went to the tenants. Immediately tobacco became the basic medium of exchange on the islands. Indeed, on January 15, 1618, the supply ship *Diana* arrived in the Somer Islands stocked with merchandise. This was a company ship, but unlike earlier supply ships that had unloaded their goods in the company storehouse, the *Diana* sold the supplies directly to the colonists for tobacco. Butler stated,

...The good shyp called the Dyana, sent from the Adventurers [stockholders] with fresh supplies, both of goods and men, arriues in the townes-harbour [St. George's Town]; by her likewise was brought ... the first magazin [store of supplies] to be sold for tobacco that euer thes ilands sawe; of which since ther hath bin euery yeare one, to the cost rather than the profitt of the inhabitants; ...This shyp after six or seuen weekes staye, cleares herselfe of the ilands, and makes her waye homewards, haueing laded vpon her about some thirtie thousand waight of tobacco, the which proueinge [proving] good, and comeinge to a luckye markett, gaue great contentment and incouragement to the vndertakers [stockholders] to proceede lustely in their plantation;⁷⁵

The first major crop of tobacco had been planted in May and was harvested in October. The tobacco was cured for about a month and then packed in cedar casks. The casks were shipped to St. George's Town, where they were stored in the town church. At St. George's Town harbor the farmers purchased supplies from the ship using tobacco as currency, which the *Diana* accepted at a value of 2s6d per pound of tobacco. Once all the supplies were sold and the casks of tobacco had been delivered onto the ship, the crew prepared to return to England. Based on letters sent back with the *Diana*, we know the ship departed sometime soon after March 12th.⁷⁶

Butler implied the stockholders made a good profit from the 30,000 pounds of tobacco the *Diana* brought back to England.⁷⁷ Indeed, the inhabitants of the Somer Islands believed their tobacco should be rated higher than 2s6d per pound but the London shareholders would not permit a higher rating. Therefore, the colonists regularly felt they were being taken advantage of by the shareholders. With the success of the *Diana*, the shareholders no longer maintained a storehouse of supplies for the colonists to purchase with credits or tokens, rather, they began to make outright sales of merchandise for tobacco and found the venture to be profitable.

The success of the *Diana* signaled the end of a general supply distributed through the company storehouse. Butler mentioned that while the *Diana* was docked in the Somer Islands, Governor Tucker was constructing his private house at company expense, conscripting workers and "...employeinge many perticuler necessaryes out of the store which belonged to the publick seruice to that use."⁷⁸ Quite likely this episode expended the last of the general supply. The company storehouse was not resupplied in 1618 since the need for a general supply became obsolete. The only company stockpiles of provisions for general distribution mentioned in later

75 Butler, *Historye*, p. 110.

76 Ives, *The Rich Papers*, pp. 17, 47, 67, 69-72.

77 Butler, *Historye*, p. 110 stated the tobacco "proueing [prooving] good, and comeinge to a lukye markett, gaue great contentment and incouragement to the vndertakers to proceede lustely in their plantation."

78 Butler, *Historye*, p. 114.

documents were storehouses of corn, as those at the various forts and in the parishes.⁷⁹ Stockpiles of hardware or merchandise were not mentioned. Indeed, it appears the building that had been used as the storehouse was replaced in 1621 by a larger cedar warehouse. This new structure was still called a storehouse but it had an entirely new function. It was a protected location where individuals could temporarily store the items they purchased from the magazine ship, until they were able to locate a boat that could transport their goods to their home on the main island.⁸⁰

From correspondence between the governor and the company board of directors in London we know the practice of a company distributed general supply was probably defunct by 1619 and was certainly out of existence by late 1620. We learn Governor Butler had charged the company £22 for supplies purchased sometime during his first year in office (he took office on October 20, 1619).⁸¹ Somer Islands Company officials in London replied to his request for reimbursement in an undated letter stating "We haue, for this once, accepted and payed your bill of exchange £22, being the first, and we hope the last, president [precedent] in that kind."⁸² Butler was agitated by this reply and addressed the issue as part of a long report on his activities that he sent to the company officials in the fall of 1620. He explained the bill was reimbursement for expenses he had incurred when purchasing items used to maintain company property and to supply company projects. Butler explained he had inquired as to how such bills had been paid by past administrations and received the answer that in the past such supplies had come from the company storehouse. Interestingly, he spoke of the company storehouse in the past tense, implying it no longer existed and stated he was forced to purchase items out of his own pocket! He explained

The bill of exchange I charged vpon you the last yeare (which it seems you misliked) was forced vpon me... I made enquirie after courses formerly held [i.e. I asked about past procedures], and was generally answered that whilst ther was generall magazins [supplies] the cusome [the customary or general procedure] was to take up so much for such vses as was found needfull to supply thoes necessities, and so to returne it [it refers to the cost of the supplies] vpon the aduenturers [stockholders]. ... Informe me then, I beseech you, how shall your publick botes [boats] attendinge the fortes be furnished? how are your negroes to be kept from goinge naked? and what meanes els are ther to recouer mattocks, shouells, grabbinge axes, and the like tooles requireable for fortings? ... [Butler goes on at length asking the company governors - who should

79 As mentioned in Butler, *Historye*, pp. 134, 145, and 169 concerning the forts and p. 202 on the regulation in the Acts of the Assembly of 1620 requiring each tribe to keep a public store of corn. Stockpiles were essential because hurricanes, called "blasts" by the colonists, could destroy an entire crop overnight. Also, up to 1622, corn was husked and dried before being stored, resulting in a partial loss of each crop to insects. As Butler stated "good husbands through out the whole llands, who had diligently and painefully husked and hung up all their crop, began euery wher to complaine and lament the ruine and spoyle of it by the flie and weauell." In 1621 some lazy farmers stored their corn in the husk, which proved to be beneficial since the husk was discovered to be a "naturall coate-armour" protecting the kernels from insects. See, Butler, *Historye*, pp. 281-82.

80 In an undated letter from 1621 Butler stated he had built a new church in St. George's Town and had also constructed "a newe storehouse vpon the warrfe." In his *Historye*, Butler explained that he built "...a newe large storehouse of framed caeder in a smale lland, lieing nere vnto the townes-warfe, and fitted it for the receipt of all generall newe supplies from England by euery shypinge, the which was made with two dores for the easier conuayence of goods in and out; by the former want whereof the people had sustayned much spoyle and dammage in their prouisions, which wer sometimes, by scarcetie of botes and lack of staires, windes to carry them awaye, forced to lie open to all weathers, a moneth or two before they could be carried into the maine." (Butler, *Historye*, pp. 215 and 230-31).

81 A later letter from 1620 implies the charge was made in 1619 since in the dated 1620 letter Butler stated the event occurred "last yeare." This narrows the time period of the event to between late October of 1619 and March 25, 1620, which was the start of the English New Year.

82 Butler, *Historye*, p. 210.

be liable for these charges? and then concludes with] ... Hetherto I haue performed it with mine owne store, but can doe it noe longer.⁸³

From these letters it is clear there was no general supply at the company storehouse in 1620 and it seems quite likely there had not been one in 1619. Whether a general supply existed in 1618 is not mentioned in the sources. It seems probable the general supply became obsolete in 1618 with the sale of goods from the *Diana* directly to the population.

Since Hogge money had been issued to purchase general supplies from the company storehouse in St. George's Town, the coins became less important as the population moved to the main island and the role of the storehouse diminished. The storehouse may have closed in 1618; documents strongly suggest it had closed by 1619. When the storehouse closed the token coinage lost its only intrinsic value, namely the guaranteed acceptance of the coinage at the company supply storehouse. Quite likely the tokens were taken out of circulation, or possibly demonetized, at that time.

The new economy

In a period of about seven-and-a-half months, from May of 1617 through January of 1618, the Somer Islands economy was transformed. Before the shares were opened a significant portion of the population was centered in St. George's Town and was dependent on company initiated public works employment with exchanges based on the use of Hogge money or the bartering of supplies. Once the shares were open to farming the colonists disbursed throughout the main island. Economic prosperity was dependent on private agricultural employment with transactions based on tobacco.⁸⁴

The new economic realities were institutionalized during the first General Assembly held in the Somer Islands, which convened on August 20, 1620. All public acts that were passed in the Assembly defined transactions and fines in terms of tobacco. For instance, anyone killing a young tortoise under 18 inches in diameter was to be fined 15 pounds of tobacco while anyone using another person's farmland as a pathway that resulted in damage to a crop of tobacco or corn was to be fined ten pounds of tobacco.⁸⁵ Among the acts passed during this session was one "for the leaue of one thousand pounds of Tobacco towards the payment of publicke works for this year 1620" specifically stating the levy was to pay for repairing the forts.⁸⁶ Thus, as early as 1620, public works were being funded through taxes collected in tobacco rather than from the conscription of laborers.

The 1620 tobacco levy to repair the forts signals a shift that clearly affected the future of Hogge coinage. Conscription was replaced with taxation. Also, since taxes were collected in tobacco it is quite likely the company anticipated the construction workers were to be paid with tobacco rather

83 Butler, *Historye*, p. 219. This undated long letter (on pp. 215-24) reports on many months of activities. The opening of the letter stated "I begin thes my letters wher my last ended, at the *Garlands* leaueinge of us,..." The *Garland* departed about January 23, 1620. The letter also mentions the General Assembly of August 1620 as an event earlier that year. The letter may date to October as it ends stating the letter is a full account of his activities from the past year. Butler took over as governor in October of 1619.

84 Richard Norwood observed in his description of the Somer Islands that soon after his survey was completed the economy changed. He wrote "So that in short time after, euen before the expiration of Captaine Tuckers gouernment, the Country began to aspire and neerely to approach vnto that happinesse and prosperitie wherin now it flourisheth." See, Ives, *The Rich Papers*, p. 375 and Norwood, *The Description of the Sommer Ilands*, in Norwood, *Journal*, p. lxxvii.

85 Lefroy, *Memorials*, vol. 1, pp. 170-73 and Butler, *Historye*, pp. 201-2.

86 Lefroy, *Memorials*, vol. 1, pp. 176-77 and Butler, *Historye*, p. 202.

than Hogge money. Precisely how the laborers were paid in 1620 is not mentioned in any surviving source. However, we do have a hint that tobacco may have been used to pay laborers as it was certainly used to pay soldiers. Another statute passed in 1620 established a permanent garrison of twelve soldiers at King's Castle. The statute explained the soldiers would be supplied with food and provisions from the farmers on the main island and that they would also receive a thousand pounds of tobacco from a tax on the parishes.⁸⁷ There was no mention of paying the soldiers in either Hogge money or any other type of coinage.

Additional evidence that tobacco quickly become the basic medium of exchange is found in a letter from Governor Nathaniel Butler to Nathaniel Rich written on January 12, 1620/1. In the letter the governor complained about a company order requiring that all the tobacco grown in the Somer Islands be sent to London. The governor wanted the tenant farmers to be allowed to keep the tobacco they earned and not be required to ship it to London. However the company did not trust the growers. An order from the company court had stated

...to preuent wroung to the owners, all tobacco and other commodities which were to be diuided betweene the owners and tenants, should be sent into England vndeuided [undivided], with a note vnder the Bayleyes hand [the bailiff was the presiding company official in each parish], what portion belonged to each person; accordinge whervnto a iust [just] diuision and distribution should be made, as the same should be sold in England, etc., at his arriuall.⁸⁸

In the January 1621 letter to Nathaniel Rich, Governor Butler pleaded against the implementation of the company's order. He requested that the farmers be allowed to retain their tobacco, stating "Our only currant mony is Tobacco and if you take away that – farewell all commerce amongn our selvs, and then judge you what confusions will ensue."⁸⁹ Clearly, Butler's letter implies most transactions were based on tobacco. The wording may have overstated the case,⁹⁰ since the letter was meant to be an argument to convince the company to leave some tobacco in the islands. However, it seems by this date there was little or no use of Hogge coinage.

Tobacco and credit for tobacco were the basic media of exchange. We see this as early as Butler's first year in office. The tobacco crop from 1619 had not been as successful as the first crop in 1618.

87 Lefroy, *Memorials*, vol. 1, pp. 167-68. Butler stated that before the establishment of the permanent garrison in 1620 the fort had been in the "...care and mannagement of one poore half-blind gunner and his wife." This lookout was to fire a cannon when a ship was spotted. The cannon could be heard at the other end of the bay in St. George's Town and would alert the population. At the warning members of the company guard would quickly jump in boats and travel to the fort to take up defensive positions. See Craven, "Introduction," vol. 17, pp. 440-45 and Bulter, *Historye*, p. 200.

88 Bulter, *Historye*, p. 207.

89 Ives, *The Rich Papers*, p. 229. Also, in May of 1621 the governor issued a proclamation on how to take care of tobacco plants, explaining that, beginning with the crop planted that year, tobacco would be graded into "prime" and what was termed "the worst sort." Bulter, *Historye*, pp. 234-35.

90 Clearly there was a small quantity of Spanish silver. Butler related an event from 1620 concerning an attempt by a merchant ship to sell liquor to the colonists in exchange for hard currency, probably Spanish American silver. Butler stated that the island inhabitants were heavy drinkers and were looking for an additional supply of liquor when a boat arrived "well stufft with loquours." Governor Butler then had to temporarily prohibit the sale of anything for money, rather "all sales should only be made by waye of exchange and bartringe..." because "... (all the tobacco being already exported that was worthe any thinge for which it was wont to be bartred) that that smale store of coine which by diuers importations was gotten in amongst them would be exhausted and carryed away..." Butler, *Historye*, pp. 226-27. Among the events that brought some Spanish silver to the islands is one related in Butler where some shipwrecked Spaniards had the equivalent of £140 in Spanish silver. The money was taken and the Spaniards were charged 4s per week per person for room and board (see, Butler, *Historye*, p. 266, with a few discoveries of smaller quantities of silver coinage mentioned on pp. 10 and 67-68). The Spaniards were only allowed an exchange rate of 4s per Spanish dollar (eight reales); this was the standard rate used in Jamaica and probably in Barbados at that time (see, Chalmers, *History of Currency*, pp. 48, 97-98 and 152). This undervaluation of Spanish silver was below the standard rate offered in England at the time, which was 4s4d per eight reales. The intrinsic value of the eight reales was 4s6d.

Butler explained this situation had caused a great deal of debt to accumulate, stating "...in respect of many detts growen betwixt partye and partie vpon most vrgent occasions, as to smithes for fish-hookes and tooles, carpenters for botes [boats], etc." Because of the widespread nature of the debt crisis, it was necessary to rectify the situation as soon as possible. Therefore, Butler proposed that all debts of less than fifty pounds of tobacco be paid out of a lump sum taken from each debtors' crop and that the amount be credited against the debtors portion of the crop.⁹¹ This shows the general population depended on tobacco or credit for future payment in tobacco as the standard for commerce.

Once the farmland on the main island became available, people no longer wanted to work on company projects. More profit could be made from tobacco. Farming replaced construction as the preferred employment. The company supply storehouse closed and tobacco became the new medium of exchange. In this new economy there was little use for company rated Hogge money.⁹²

Postscript on Hogge Money, tobacco and the economy of colonial Bermuda

Hogge coinage was a short-term experiment to an economic problem. Namely, the newly chartered Somer Islands Company needed to pay laborers for company work and wanted to provide a remuneration plan that was more amenable to the workers than the credit system used earlier under Moore when the colony was simply a subsidiary of the Virginia Company. Further, it seems the workers had expressed a desire to receive a tangible form of pay at the end of a week in place of the delayed payment through a profit-sharing plan, which was favored by the Somer Islands Company shareholders. Indeed, Governor Tucker's orders suggest payment in coinage was an option requested by the laborers and the sources tell us the coinage was used for this purpose. Unfortunately, there is no direct evidence explaining how the coinage was received. Indirectly, we have some indication that the workers may have tolerated or even approved of the coinage. Butler recorded numerous complaints made against Governor Tucker for arbitrary use of power and related offences. Nathaniel Butler did not hesitate to describe and elucidate on the shortcomings of his predecessor, however there are no records of complaints from laborers regarding Hogge money.⁹³ From this scant evidence one cannot draw absolute hard and fast conclusions. However, the lack of a negative reaction does seem to indicate the token coinage was probably accepted and had a positive role in appeasing the laborers demands for an alternative to the profit-sharing plan. Payment by either method was available to the laborers. In

91 Butler, *Historye*, p. 217 on the poor harvest with the quote and discussion of the debts on p. 220.

92 Breen, *Walter Breen's Complete Encyclopedia*, p. 9, surmised the value of Hogge money was based on a weight of tobacco, not the weight of the metal, thus he suggested the coins were actually tokens backed by tobacco. He suspected Hogge money may have been used as warehouse receipts. There is no evidence for this theory. Indeed, the sources suggest Hogge tokens were replaced by tobacco.

93 Butler, *Historye*, p. 76 mentioned that the coinage "in a scoff" was "tearmed by the people hogge mony." This brief statement should not be taken to suggest the coinage was rejected. If that had been the case Governor Butler would certainly have elaborated on the statement. In every other instance regarding a point of conflict that occurred during his predecessor's administration Nathaniel Butler took the opportunity to elaborate on the details. Butler was not writing objective history but rather was trying to show how much better his administration was in comparison to what had taken place under his predecessor, Daniel Tucker. Rather, this simple statement about the name of the coins most likely means the colonists, in jest, referred to the coinage based on the portrait of the hog depicted on the coins. This would follow standard practice. In colonial times coin terminology was replete with such descriptive phrases as the Pine Tree coinage of Massachusetts, the Dutch Lion or Dog dollar and silver rider, the French Louis and several other examples. Similarly, modern colonial coin enthusiasts have adopted this convention and greatly increased the practice, so that we have varieties such as the: snipe nose, muttonhead, African head, Hercules head, horned bust, big head, little head, laughing head, camel head and serpent head, just to list a few of the colorful names within the Connecticut and New Jersey copper series. These names are certainly meant to be whimsical and also practical, since they serve as a quick method for identification. Descriptive names should not be construed as terms of derision, indeed a named variety usually commands a premium over unnamed varieties of a similar rarity and condition!

this light Hogge money could be considered a useful short-term experiment to solve the problem of paying workers in an undeveloped colonial economy.

One may ask – if the Hogge money token coinage played a positive role, why didn't the company continue to issue it? The answer relates to economics. The Somer Islands population grew dramatically once the farms on the main island were opened. Governor Butler brought 500 colonists with him when he arrived in October of 1619, effectively doubling the population of the colony overnight. Butler estimated there were 1,200 inhabitants by 1620,⁹⁴ almost two-and-a-half times the population of 1615.⁹⁵ The company had no desire or reason to increase their operating costs by producing significant additional quantities of token coinage for this rapidly growing plantation. Indeed, the quantity of coins emitted in 1616 appears to have been hardly enough for a population of about 100 laborers at St. George's Town. It certainly was not enough for the entire population of the islands, which, at the time, was around 500 people.

Further, there was no reason for the company to incur the expenses related to minting and transporting coinage at a time when the colonists were producing an abundant quantity of a perfectly acceptable money substitute. Additionally, the company had a monopoly in the islands, thus any legally imported items purchased by the settlers would have been sold by the company or through its appointed agents. It was more profitable for the company to sell items to the colonists for tobacco than it was to sell them items for company produced coinage. Tobacco could be immediately loaded onto a supply ship and brought to London where it could be sold for hard cash. If the company had sold supplies for tokens the only thing the company could do with the tokens would be to use them to purchase tobacco from their tenants! This would simply add another step to the process and cut into company profit because the company would incur the cost of producing and transporting the tokens. Also, the inhabitants preferred using tobacco to tokens since they could, and did, purchase products at reduced prices from merchants (or pirates) who did not have company permission but were willing to sell items for tobacco. Such sales had never occurred in earlier periods when the colonists only had credits or tokens.

Essentially, the adventurers received half of the Somer Islands crop of tobacco directly from the shares, based on their agreements with their tenants. Further, as investors in the company, they obtained a sizable portion of the tenants' share of the tobacco when the company supply ship sold items to the colonists for tobacco. It was much cheaper and far more profitable for the company to allow the colony to use tobacco as money rather than to produce a token coinage.

In the long term the tobacco solution created problems since overproduction of tobacco reduced the value of the product and also depleted the soil. By 1629 there was such an oversupply that tobacco was selling in London for a little less than 1s per pound. When calculating the cost of customs and freight the Somer Islands farmer would only receive 1d to 3d per pound!⁹⁶ However, in 1620 the company stockholders did not foresee these outcomes. They were happy to see a profit finally coming their way after investing in the islands since at least 1612.

Hogge money was created by the newly formed Somer Islands Company in 1616 and briefly played a role during the early colonial period when the company was concentrating on creating an infrastructure throughout the company-owned portion of the Somer Islands. Once the

94 Butler, *Historye*, p. 227.

95 The population was fairly stable at around 500 from 1615 through the opening of the shares in 1617.

96 Wilkinson, *Adventurers*, pp. 218-19. Governor Tucker anticipated this problem. He felt tobacco would not allow the Somer Islands economy to become self sufficient and wrote to the company officials in London that a diverse rather than a one-crop agricultural economy was necessary. Also, the Somer Islands Puritan minister, Lewis Hughes, wrote a treatise against tobacco, calling it a moral and social evil.

infrastructure was in place and the shares were surveyed and opened the colonists turned from construction to farming. The token coinage disappeared and both the colonists and the stockholders turned to tobacco as the cash crop that would drive the economy and bring them wealth.


Tobacco remained the basic currency in the Somer Islands through the middle of the seventeenth century. During the second half of the century, as the value of tobacco steadily declined, the quantity of Spanish American coinage in circulation increased. Coinage became the preferred medium of exchange, so that by 1670 a law had to be passed stating that in judicial judgments (at the local court or Assize) one could not refuse payment in tobacco. By the end of the century a law was passed to protect the tobacco farmers, reaffirming that it was permissible to offer tobacco as a form of payment in general commerce. The act for the "Incouragement of the Planting of Tobacco" passed on October 31, 1698, stating that merchantable tobacco could be used as payment at the rate of 3d per pound. Thus, by the end of the century the value of tobacco had plummeted tenfold from the 30d (2s6d) per pound rate at which the *Diana* had accepted tobacco back in 1618. Under these circumstances few people wanted to accept it in trade.

In the early years of the colony Spanish silver coinage had been undervalued. Economic prosperity was centered on growing tobacco rather than on trading goods for Spanish American silver. Since the Somer Islands Company had a monopoly in the colony, they actively discouraged trade between the colonists and any other suppliers. Thus, as in Jamaica and other islands, the eight reales was undervalued, so that an eight reales, with an intrinsic value of 54d (4s6d), traded at only 48d (4s). This undervaluation of the real discouraged importation of Spanish coins and favored the exportation of any Spanish coinage that happened to make its way to the Somer Islands. Obviously, it was more advantageous to spend Spanish coins in colonies where they traded at a higher rate. Without a ready supply of silver the colonists would be less able to break the company monopoly by trading with pirates who were willing to undersell what the colonists referred to as the "cutt throate" rates charged by the Somer Islands Company. However, as tobacco prices declined the colonists turned to Spanish silver as a more stable medium of exchange. Consequently, in January of 1663, the value of the eight reales was raised to 60d (5s). It was expected this increased valuation would encourage importation of Spanish silver and help to retain the coinage in the country. However it was soon realized even higher rates were needed in response to increased valuations elsewhere. On February 10, 1668, the value of the eight reales was increased again, this time to 64d (5s4d). When Queen Anne set standard rates for silver coins in all British colonies in her Proclamation of 1704, the Bermuda Assembly rejected the royal intrusion into their fiscal matters and in 1707 switched to a gold standard, as did several West Indian islands. The silver eight reales was replaced as the standard coin in daily commerce by the gold Spanish American pistole (a pistole of 102 grains, that is, 4 dwt. 6 gr., was valued at 24s).⁹⁷

During the early eighteenth century gold coins were the standard in Bermuda. Silver was accepted as a commodity and usually traded at 82.5d (6s 10.5d) per ounce. However, due to a scarcity of silver coins, merchants would sometimes offer a premium of five to eight percent for payment in silver. There was also a need for a small change coin. Thus, to facilitate daily commerce, the debased "new plate" Spanish silver pistareen of two reales was introduced. This coin was minted in mainland Spain starting in 1707 with a silver content that was 20% less than equivalent Spanish

⁹⁷ Chalmers, *History of Currency*, pp. 151-55. The Somer Islands Company was dissolved in 1684 and Bermuda became a Royal Colony.

American coins. The pistareen traded in Bermuda and the other islands by the piece (or tale) at 16d each, rather than by weight.⁹⁸ Because the coins were debased, there was little fear they would be melted for their silver content. At this time any British coinage in circulation was raised one-third of its face value, hence an English crown with a face value of 60d (5s) passed at 80d (6s8d). Starting in 1761 the Public Treasurer began issuing interest bearing, legal tender paper notes, which were used to pay salaries and to acquire goods for public use.⁹⁹

In 1793 the Bermuda Islands issued a copper penny, which was produced in Birmingham at Boulton's Soho Mint.¹⁰⁰ The Hogge coinage of 1616 and the 1793 penny were the only coins issued by Bermuda during the colonial era. No other coins were issued in the islands until the commemorative crowns of 1959 and 1964. It was not until 1970, with the introduction of the decimal system in the United Kingdom, that Bermuda began regularly minting coins. Interestingly, the Bermuda cent depicts a hog on the reverse. 

Acknowledgments

I am grateful to Gary Trudgen, Phil Mossman and Mark Sportack for reading drafts of this paper and offering corrections, suggestions and comments. Phil offered many extremely helpful suggestions and clarified numerous geographic details about Bermuda. His mother's family has been there since the 1790s and he lived there as a youth. Mark also made several helpful suggestions. He specializes in Bermuda coinage and has read all the printed primary sources. Mark and I exchanged several lengthy e-mails and had some interesting telephone discussions regarding early Bermuda. Naturally, the interpretations and opinions expressed in this paper are my own and do not necessarily reflect the views of the readers. An abbreviated version of this paper was delivered at the Chicago Coin Club meeting of March 12, 2003.

98 At the 1668 rate of 64d per Spanish American eight reales, a full weight two reales would be valued at 16d. The debased mainland Spanish pistareen should have been rated 20% lower at full weight and even less if it was under weight. That the intrinsic value was so far below the face value demonstrates these coins were treated like coppers, that is, as coins of convenience. Like the coppers circulating in colonial America, the pistareens were not weighed but simply traded by the piece, therefore, underweight coins traded at full face value.

99 Chalmers, *History of Currency*, pp. 155-57 and Mossman, p. 58.

100 For an excellent discussion on the history and varieties of this issue see, Sportack, "Bermuda's Copper of 1793."

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St. Patrick Coinage Discovery

by
Leo Shane; Warminster, PA

(TN-190)

In CNL 121, Dr. Brian Danforth presented an excellent article on *Who, When, Where and Why* the St. Patrick coinage was minted. One of the important facts revealed in this article was the identification of an invention by Peter Blondeau. His one-step process for striking coins while also imprinting lettering or reeding on the edge was a cost-savings to the more expensive two-step technology then in use. It was also less costly than the segmented collar technology also used at that time. Blondeau's invention was instrumental in his production of the coins of Charles II in 1660. It is also a key reason to believe he is the minter of St. Patrick coinage.



Figure 1: St. Patrick farthing believed to have been struck with a segmented collar. [Shown 1.5X actual size.]



Figure 2: Two edge photos of the coin illustrated above showing the diagnostic line attributed to segmented collar technology.

Figure 1 presents a photo of a St. Patrick farthing believed to be struck with a segmented collar. Two edge photos of this farthing are shown in Figure 2 to illustrate the "line" through the reeding, which is a diagnostic of the segmented collar technology. This occurs where the two parts of the segmented collar meet during striking. This is contrary to the hypothesis by Danforth that St. Patrick coinage was minted by Blondeau using his new invention. Dr. Danforth and others have examined the coin and all agree that the diagnostic "line" is consistent with a coin struck with a segmented collar.

The existence of this coin in no way disproves the many facts presented in Danforth's article. It is speculated that in a fashion similar to the striking of Charles II coins, Blondeau may have employed an array of methods to produce as many coins as quickly as possible. If this is true, this would mean that the coin pictured was struck early in the manufacture of St. Patrick coinage before the one-step single

collar technology was fully adopted. This is an area for further study and can only be confirmed after an examination of a large number of coins.

THE MARIS PLATES

by

Roger A. Moore, M.D.; Moorestown, NJ

and

Dennis P. Wierzba; Norwell, MA

INTRODUCTION

In 1881 Edward Maris, M.D. published an elephant-sized folio titled, *A Historical Sketch of the Coins of New Jersey*,¹ which remains to this day the primary reference for the attribution of New Jersey colonial coins. The center piece of the book is a 14 3/4 inch by 19 1/8 inch black and white photograph (on a 18 1/2 inch by 23 inch folded page) of the obverses and reverses of the various New Jersey coppers, St. Patrick coinage, and "C" reverse mulings, arranged in a manner showing the known die combinations existing at the time of publication, with the exception of the "79-ee" which was described but not photographed. The "phototype" picture, as indicated in small type at the lower left hand corner of the photograph, was produced by F. Gutekunst in Philadelphia. The photograph was made using the heliotype process which is a photographic process whereby an image is transferred to a bichromatic gelatin layer applied to a waxed sheet of glass by exposure to sunlight through a photographic negative. The gelatin is then removed from the glass sheet and applied to a pewter sheet, a copper sheet, or a lithographic stone. The gelatin which has not been exposed to sunlight is easily removed leaving the remaining gelatin surface which will hold ink. This process was said to be invented in England in 1869 by Ernest Edwards and was used for small publication runs.^{2,3} As a final touch to the photograph, Dr. Maris hand painted a yellow "splasher" on the crowns of the St. Patrick halfpenny and farthing images.⁴ The size and shape of these painted splashes vary in each photograph and some do not have them at all.⁵ Of interest, high quality color photographs of the same St. Patrick halfpenny and farthing depicted in Dr. Maris's original photograph also appear in the 1980 sale of J. W. Garrett's collection,⁶ where there is no evidence of a "brass splasher." Therefore, Dr. Maris took editorial license in depicting these two coins as having "brass splashes" (which these types of coins frequently have) when none existed on the actual coins. Of equal importance, Ray Williams discovered the ligature lines on his original Maris plate-I photograph overlapped the actual coin images in a number of cases.⁷ Initially, the thought was that the photographs were run through a double printing – first with the coin images and second with the ligature lines, numbers, and letters. However, other original Maris plate-I photographs do not have similar ligature line overlaps, which presents the intriguing question of why the differences between original Maris plate-I photographs exist.

The photographic plate appearing in the Maris 1881 folio will be referred to as the "Maris plate-I photograph," throughout the remainder of the paper. In addition, the actual object from which this photograph was taken will be referred to as the Maris plate-I. A second set of four photographs exists of a zinc sheet holding electrotypes of New Jersey colonial coin obverse and reverse die varieties arranged in a manner similar to the Maris plate-I. However, rather than a single large photograph of the entire zinc sheet, this set of photographs divides the sheet into four quadrants. Additionally, there are significant differences evident in these photographs, including rearrangements of the coins and the use of some different coin specimens. These four photographs were made by Steven K. Nagy in Philadelphia^{8,9} in the 1940s and are commonly called the "Nagy plates." The Nagy photographs will be referred to as the "Maris plate-III Nagy photographs," throughout the remainder of this paper. The actual zinc sheet holding this arrangement of electrotypes will be referred to as the Maris plate-III. Finally, there is another set of photographs¹⁰ of a zinc sheet holding an arrangement of New Jersey electrotypes which is located in The New Jersey Historical Society. These photographs will be called the "Maris plate-II photographs" and the actual zinc

Bibliography/Endnotes start on sequential page 2526.

sheet with electrotypes from which the photographs were taken will be called the Maris plate-II. The reasoning behind the numbering system of I, II, and III will become clear in the body of the paper.

MARIS PLATE-I PHOTOGRAPH

Controversy surrounds the object from which the Maris plate-I photograph was made. (See figure 1 A-D.) The general belief is that the photograph was taken of a zinc sheet having the numbered obverses and lettered reverses of the New Jersey coppers punched on the sheet and with ligature lines etched into the zinc between the various die varieties in order to represent the known die pairings. The obverse and reverse images of the coins depicted on the Maris plate-I photograph have commonly been thought to be high quality uniface electrotypes soldered onto the zinc sheet.^{11, 12, 13, 14} Dr. Maris was known as an excellent maker of electrotypes¹⁵ and a number of electrotypes were sold in the sale of his New Jersey colonial coin collection in 1886 by Henkels.¹⁶ Of interest is the description of lot 1384 in the November 16, 1900 sale of Dr. Maris's remaining collection by S.H. & H. Chapman,¹¹ after his death:

Maris electrotypes of N.J. cents arranged in order and numbered as the plate and from which the plate was photographed. Each piece finely made and soldered to sheet of zinc. Only two made.

This would seem to indicate that the images in the Maris plate-I photograph are of electrotypes only. Additional evidence supporting this opinion is provided in a letter to the editor by H. E. Deats which appeared in *The Numismatist* on May 1918.¹² Mr. Deats states,

It may be of interest to you to know that I have the zinc plates with copper electrotypes soldered-on, which was made by Dr. Maris and from which the heliotype in his book was photographed.

Finally, William Anton, Jr. states in his important paper on New Jersey colonials,¹³

The Maris's plate was made up from electrotypes of the New Jersey coppers.

Mr. Anton also explains,¹³

There is another plate which closely resembles the Maris plate known as the Nagy plate... .

Therefore, the obvious conclusion is that at least two zinc sheets with electrotypes of the New Jersey varieties had been made by Dr. Maris, one for his elephant-sized folio (the Maris plate-I) and one from which the Nagy photographs were made (the Maris plate-III). Further discussion of the Maris plate-III Nagy photographs and the Maris plate-III will be provided later.

The assertion that the Maris plate-I was a zinc sheet composed solely of electrotypes has been called into question.^{17, 18} In spite of Dr. Maris's ability to produce high quality electrotypes, the presence of tiny pin pricks and stains on some of the coin images in the original Maris plate-I photograph argues that actual coins, as well as electrotypes, were used in making the Maris plate-I. The following observations are typical examples noted by the authors due to the availability of the actual plate coins, though many other examples exist. A comparison of the "Y" reverse from an original Maris plate-I photograph,¹⁹ with the actual "Y" reverse of the coin itself,²⁰ shows a stain in the lower portion of the coin, most noticeable in the lower left quadrant. An electrotpe of the coin would not reproduce this discoloration (see figure 2), as shown in a close up of the Maris "Y" reverse electrotpe from the Maris plate-II photograph.¹⁰ In addition, a comparison of the "29" obverse, in both the Maris plate-I photograph and the actual coin^{19, 21} shows tiny pin pricks on both.

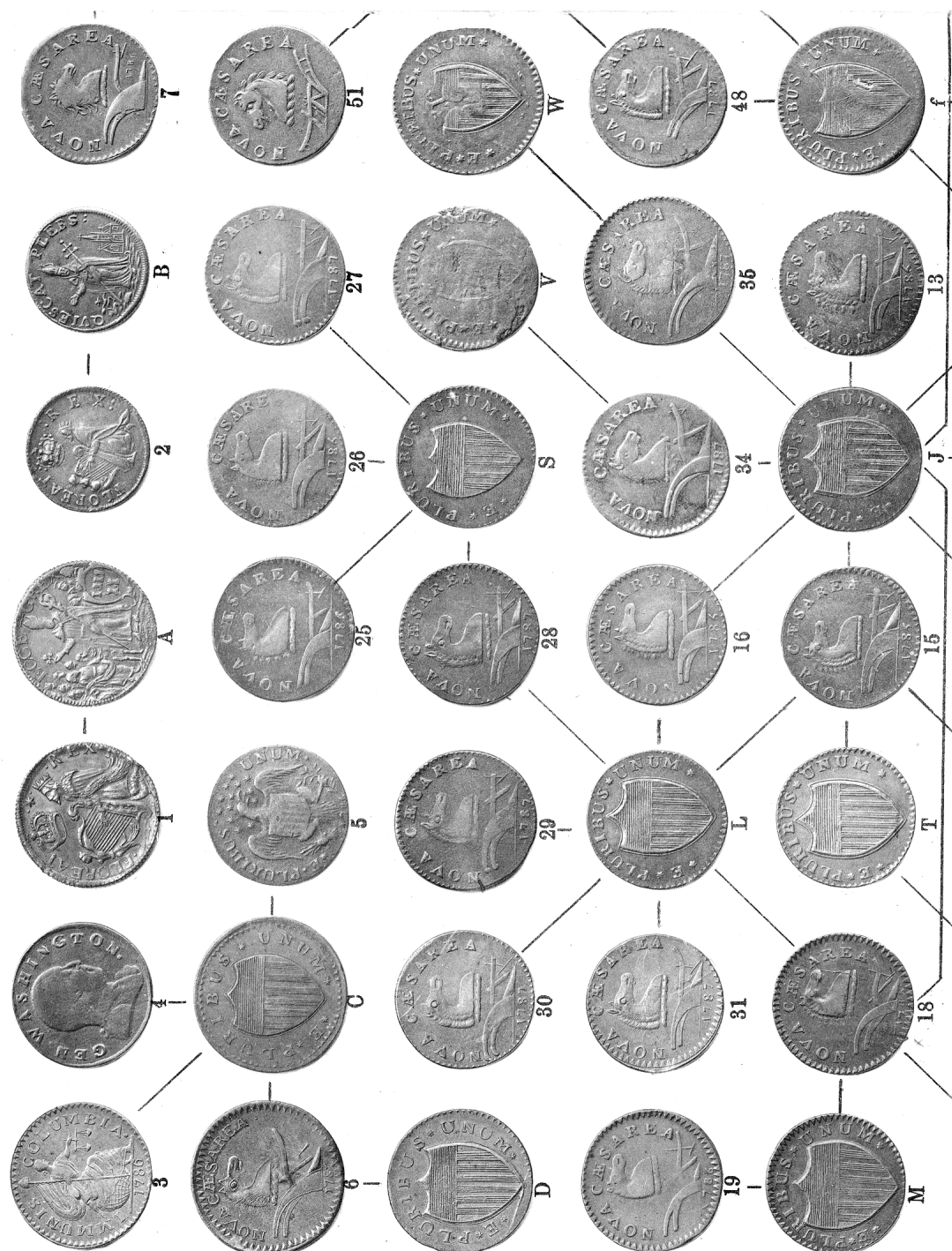


Figure 1A: Upper left quadrant of Maris plate-I photograph.

First of four photographs made from the single large Maris plate-I photograph appearing in Dr. Maris' 1881 book, *A Historical Sketch of The Coins of New Jersey*. The Figure 1 alphabetical labels indicate the following: "A" the upper left quadrant of the Maris plate-I, "B" the lower left quadrant, "C" the upper right quadrant and "D" the lower right quadrant. Photographs made from an original Maris plate-I photograph in the private collection of Roger Moore.

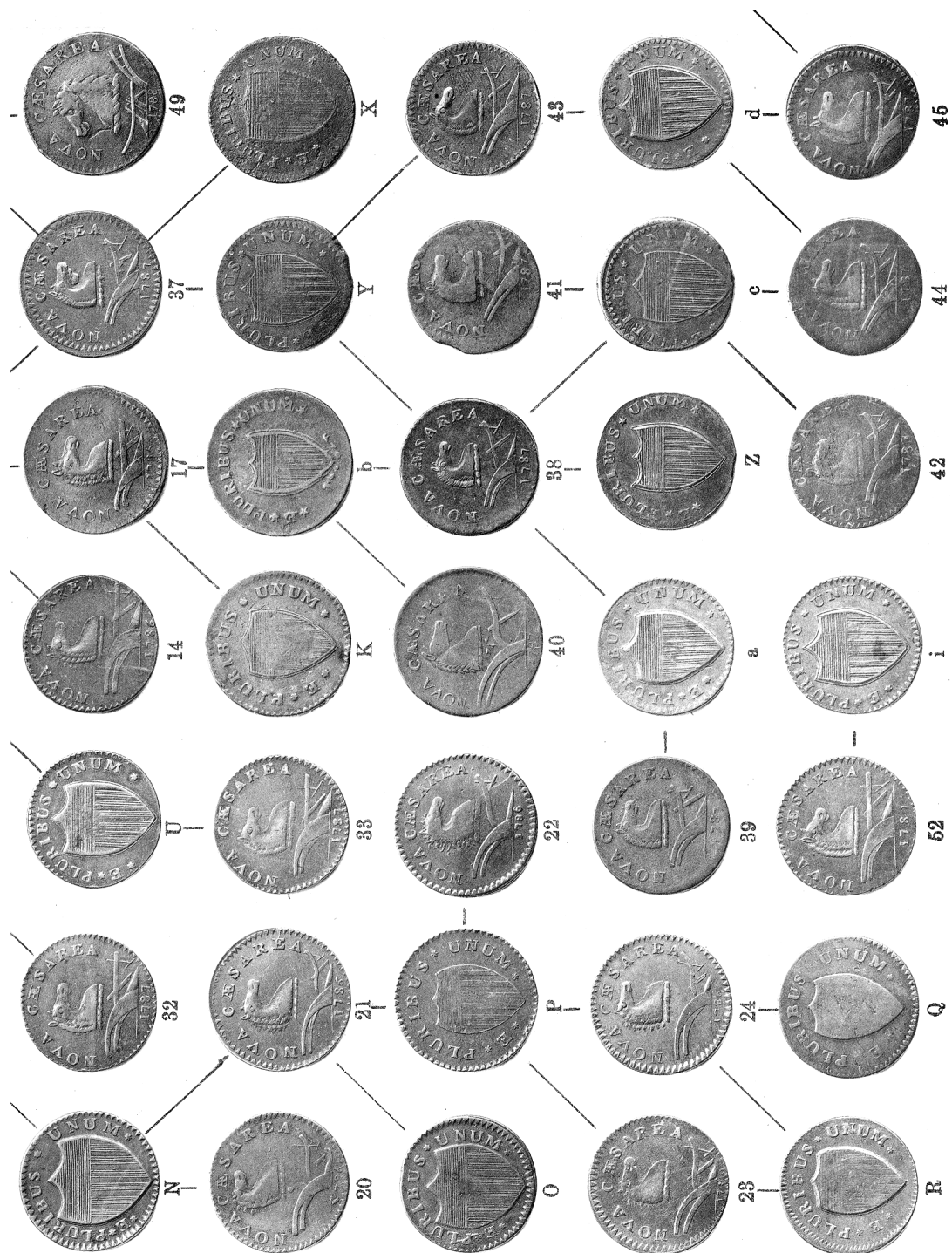


Figure 1B: Lower left quadrant of Maris plate-I photograph.

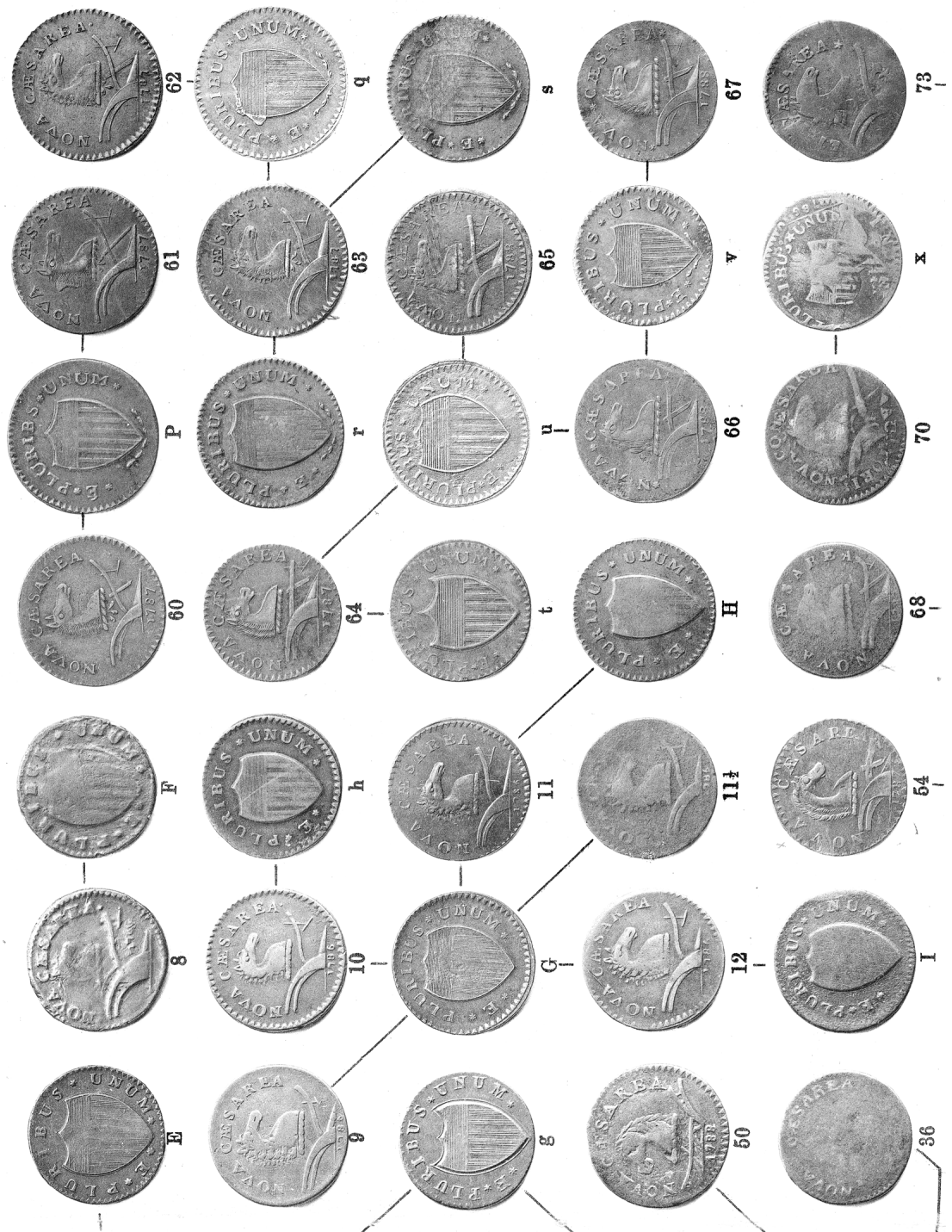


Figure 1C: Upper right quadrant of Maris plate-I photograph.

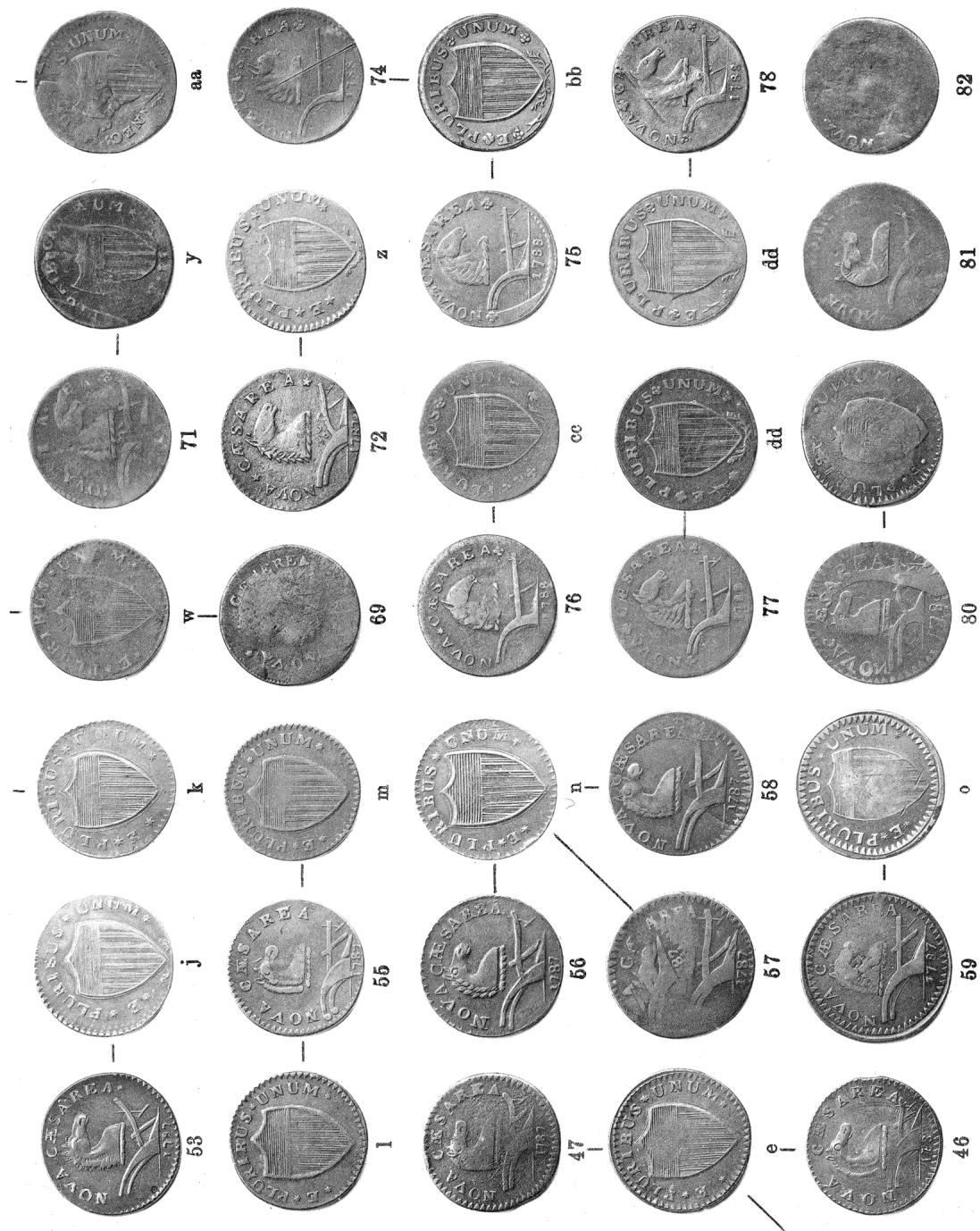


Figure 1D: Lower right quadrant of Maris plate-I photograph.



Figure 2: A comparison of the Maris plate-I photograph “Y” reverse image (left), the Maris plate-II photograph “Y” reverse electrotpe (middle), and the “Y” reverse of the actual coin (right). Note the presence of the stain below the shield in both the Maris plate-I photograph and the actual coin but missing in the electrotpe in the Maris plate-II photograph. *Individual coin images from the Maris plate-I in figures 2-6, & 9 are taken from an original Maris plate-I photograph in the private collection of Ray Williams.*



Figure 3: A comparison of the “29” obverse on the Maris photo-plate-I image (left), the Maris plate-II photograph “29” obverse electrotpe (middle), and the “29” obverse of the actual coin (right). Note the tiny pin holes that on the lower mane and under the “A” on both the Maris plate-I photograph and the actual coin.



Figure 4: A comparison of the “v” reverse on the Maris plate-I photograph image (left), the Maris plate-II photograph electrotpe (middle), and the actual coin (right). Note the stain on both the actual coin and the Maris plate-I photograph in the area just below and to the right of the shield’s tip but missing on the electrotpe in the Maris plate-II photograph.



Figure 5: A comparison of the “53” obverse in the Maris plate-I photograph (left), the electrotype in Maris II photograph (middle) and the actual coin (right). There are a number of stains on the actual coin that do not show up on either of the coin images, but the authors feel these were the result of lacquer applied after the plate photographs were taken.



Figure 6: A comparison of the “j” reverse in Maris plate-I photograph (left), the electrotype in Maris plate-II photograph (middle) and the actual coin (right).

(See figure 3.) Reproduction of such a miniscule detail would not be evident on even the best electrotypes. The image of the “29” obverse from the Maris plate-II photograph is also provided.¹⁰ Finally, the “v” reverse of the actual “66-v” coin has the same stain at the tip of the shield as the image shown in the Maris plate-I photograph, while this stain is missing on the electrotype of the “v” reverse from the Maris plate-II photograph.^{10, 19, 22} (See figure 4.) There is little doubt with the crude appearance of the “8” obverse and the “F” reverse, at least some of the images on the Maris plate-I photograph are electrotypes. We know that in the sale of Maris’s New Jersey colonial collection in 1886,¹⁶ electrotypes of “4-C”, “5-C”, “7-E”, “8-F”, “10-h”, “11-G”, “35-W”, and “81” were sold. Since Dr. Maris did not own these varieties, we must presume some of these electrotypes were used when making the Maris plate-I photograph. However, since many of the rare die combinations have at least one side which is represented by a more common die pairing, such as in the “C” reverse, the “11” obverse, and the “G” reverse, it is difficult to be absolutely certain which images are electrotypes and which are actual coins. Similarly, difficulty exists when both the obverse and reverse of a coin appears in the Maris plate-I photograph. For the variety “53-j,” there is little doubt that the images of both the obverse and reverse in the Maris plate-I photograph correspond exactly with the actual coin²³ (see figure 5 for obverse “53” comparisons and figure 6 for “j” reverse comparisons). However, both the coin’s obverse and reverse could not have been used at the same time in the Maris plate-I. Additionally, due to specific and consistent characteristics in the coin images on each of the plates, such as the doubling on the reverse and pin holes on the obverse, a different coin of the same variety was not used for either the “53” or

“j” image. One method that might explain how both the obverse and reverse of the same coin could appear in the Maris plate-I photograph is that Dr. Maris photographed one side of the coin first and then cut out the photograph and laid it on the zinc sheet next to the other side of the real coin. Though this is pure conjecture, there is evidence that others used this technique to show both sides of a coin during that era.²⁴ If true, the Maris plate-I was actually made up of a combination of coins, photographs of coins, and electrotypes. Alternatively, all the coin images could have been photographed individually, whether they were a coin or an electrotypes, and then the negatives of each image put together to form the full printing plate from which the Maris plate-I photographs were produced. Until more information is obtained concerning the method Dr. Maris used for producing the Maris plate-I photographs, the actual composition of the Maris plate-I will remain a mystery.

At the time of the publication in 1881 of Maris's classic book, the coins used to illustrate the varieties in the Maris plate-I photograph were owned by a number of prominent numismatists besides Dr. Maris, including Crosby (“4-C”, “35-W”), Stickney (“5-C”), Appleton (“11-G”, “42-c”), Parmelee (“7-E”, “8-F”, “10-h”, “11.5-G”, “22-P”, “61-p”, and “81”), and one unknown collector (“68-w”). An extensive study has been performed tracing the most prominent public auction appearances for each of the coins shown in the Maris plate-I photograph. The charts showing the results are provided in the Appendix. Many past auctions have attributed coins as having a “Maris plate” pedigree which brings a premium price, but some of these attributions have been incorrect. Care should be taken to substantiate the claim of a Maris pedigree when a coin is up for auction.

Conclusions concerning the Maris plate-I photograph

We may conclude that the Maris plate-I, from which the Maris plate-I photograph was made, was constructed by Dr. Maris for his classic 1881 book on New Jersey copper coins. It included a combination of electrotypes, real coins and possibly photographs. No physical plate has ever been found and previous references to the Maris plate-I, I believe, mistakenly refer to a plate that has a similar appearance, most likely the Maris plate-II or the Maris plate-III.

MARIS PLATE-III NAGY PHOTOGRAPHS

Steven K. Nagy made four photographs of a zinc sheet which contained 140 uniface electrotypes of New Jersey colonial die varieties soldered to it. (See figure 7 A-D.)⁸ The four photographs placed together make a single large photograph which is very similar to the Maris plate-I photograph. However, significant and important differences exist. The actual zinc sheet from which these photographs were made is known to reside in the personal collection of William Anton, Jr.^{8,25} and it is indeed made up entirely of uniface electrotypes of the New Jersey die varieties. We know the Nagy photographs (Maris plate-III Nagy photographs) were made from the same zinc plate owned by William Anton, Jr. because a recent photograph of the Anton plate^{8,25} shows many of the exact same stains and marks on the zinc sheet as shown in the Maris plate-III Nagy photographs.

The Maris plate-III Nagy photographs (A to D) will be described based upon their orientation on the actual zinc sheet. The left upper quadrant photograph will be referred to as the Maris plate-III Nagy photograph-A. Similarly, the left bottom will be referred to as the Maris plate-III Nagy photograph-B, the upper right quadrant as the Maris plate-III Nagy photograph-C, and the bottom right quadrant photograph as the Maris plate-III Nagy photograph-D. Since the actual zinc plate in William Anton, Jr.'s collection is a single unit, it is referred to as the Maris plate-III. Obvious



Figure 7A: Upper left quadrant of Maris plate-III Nagy photograph.

First of four photographs taken by Steven Nagy of Maris plate-III. The Figure 7 alphabetical labels indicate the following: "A" the upper left quadrant of the Maris plate-III, "B" the lower left quadrant, "C" the upper right quadrant and "D" the lower right quadrant. The original Maris plate-III Nagy photographs from which these images were reproduced were written upon in numerous places to clarify dies or to correct errors. The original Maris plate-III does not have these hand written notations. *Reproduced from an original set of Nagy photographs in the Colonial Newsletter Foundation collection with permission from Jim Spilman.*

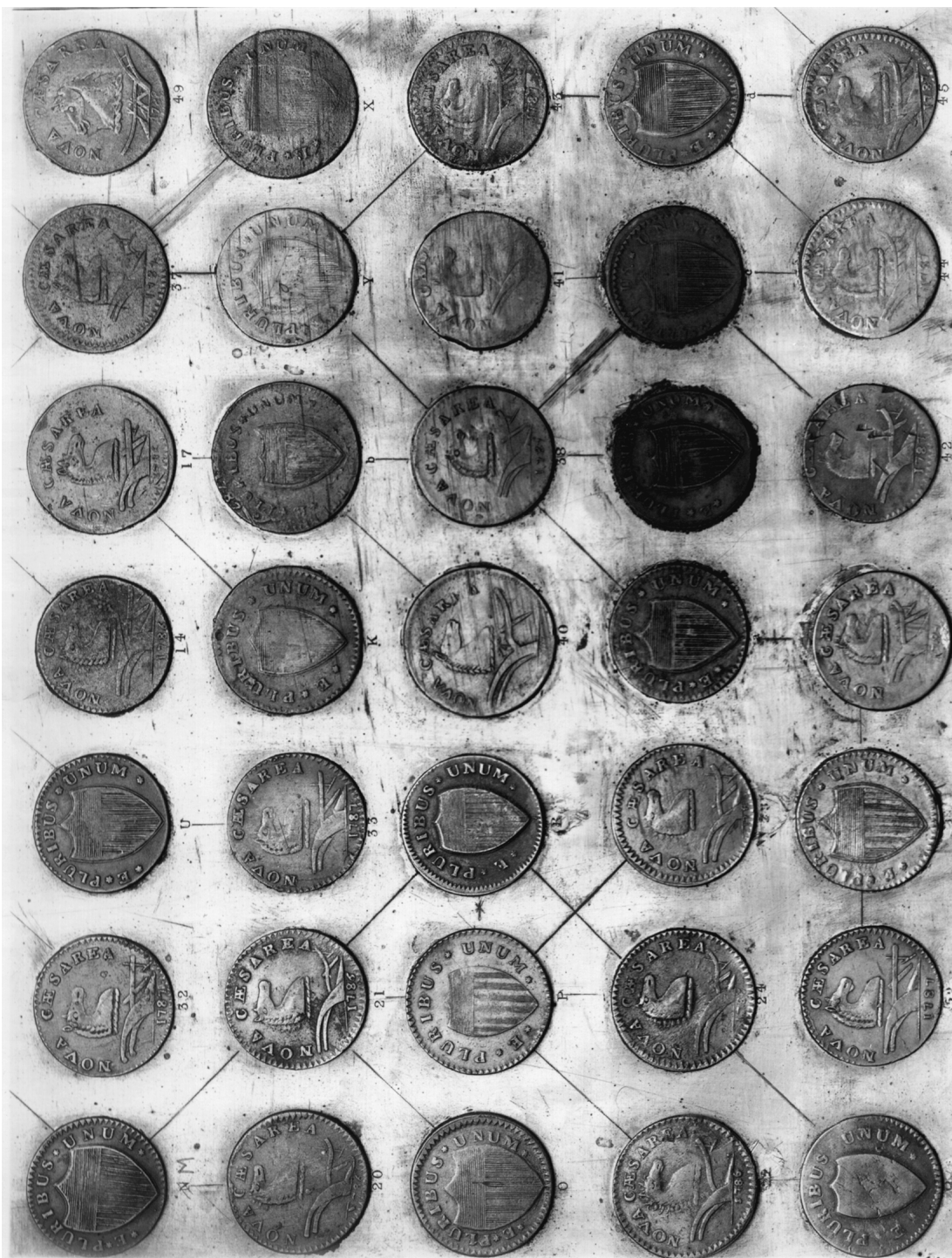


Figure 7B: Lower left quadrant of Maris plate-III Nagy photograph.



Figure 7C: Upper right quadrant of Maris plate-III Nagy photograph.



Figure 7D: Lower right quadrant of Maris plate-III Nagy photograph.

differences between the two Maris plates include: the use of smaller numbers and letters on the Maris plate-III, than on the Maris plate-I photograph; and many of the electrotypes on the Maris plate-III have conspicuous electrotype associated defects. An analysis of specific differences between the Maris plate-I photograph and the Maris plate-III Nagy photographs-A through D will follow. However, readers should appreciate that the image by image comparisons made by the authors were based on different photographs taken using very different lighting, and photographic techniques, thereby showing the coins very differently. At times, comparisons were problematic and in those cases a "best guess" was made in judging the equivalence or difference between images. Tables summarizing the comparative observations made between each of the three Maris plates, based upon image by image evaluations, can be found starting on sequential page 2516.

Maris plate-III Nagy photograph-A (upper left quadrant)

An image by image comparison of the Maris plate-I photograph with the Maris plate-III Nagy photograph-A indicates that the Maris plate-III Nagy photograph illustrates a "26" obverse and a "19" obverse that are of higher quality than the corresponding images appearing in the Maris plate-I photograph. The Maris plate III Nagy photograph has the image of an electrotype of the "T" reverse made from a similar quality coin, but different, and it has electrotypes of coins of a lesser quality used to make the "S" reverse and the "15" obverse. In addition the "M" obverse is actually an "N" obverse. From a description of the Maris plate-III Nagy photograph-B it will become apparent that the images of the "M" and "N" reverses were switched. What is not apparent is when this switch occurred. Soldered electrotypes can fall off of a zinc sheet and if both the "M" and "N" had fallen off at the same time, they could have been reattached improperly. Therefore, this switch in positions cannot be necessarily attributed to Dr. Maris during his development of the plate. The looseness of the electrotypes is shown in the latest color photograph of the Maris plate-III,²⁵ which shows the reverse "U" having shifted dramatically, indicating that the electrotype is loose. The Maris plate-III Nagy photograph-A also has the "30" obverse mislabeled as a "50." Finally, on the Maris plate-III Nagy photograph-A there is an error in the placement of a ligature line between the "1" of the St. Patrick halfpenny obverse and the "5" reverse.

Maris plate-III Nagy photograph-B (lower left quadrant)

An image by image comparison of the Maris plate-I photograph with the Maris plate-III Nagy photograph-B indicates that the Maris plate-III Nagy photograph-B contains images of electrotypes of the reverse die varieties of "Y" and "O", which were made from higher quality coins than those appearing in the Maris plate-I photograph. Different, but equivalent, coins were used to make the electrotypes illustrated as reverse "b" and obverses "44" and "24" in the Maris plate-III Nagy photograph-B. Additionally, the "42" obverse electrotype illustrated on the Maris plate-III Nagy photograph-B has been maimed with a number of hack marks. Since the hack marks are identical to the 42-c sold in the 1980 Bowers and Ruddy sale of the Garrett collection as lot # 1439,⁶ the Garrett coin was in the Maris collection at the time the Maris plate-III was made. Appleton provided the "42-c" used in the Maris plate-I photograph.¹ As previously indicated, the reverse designated as "N" is actually an "M" reverse. Other errors noticeable on the photograph include the absence of a ligature line to signify the pairing between the "23" obverse and the "R" reverse, as well as a lack of labels on the "39" obverse and the "Z" reverse. The most important change on the Maris plate-III Nagy photograph-B is the rearrangement of the positions of the "23", "22", "39", and "52" obverse dies, as well as the "R", "Q" and "I" reverses. The entire rearrangement seems to be made in order to show a new die pairing of "21-R" which was not shown in the Maris plate-I photograph.

Maris plate-III Nagy photograph-C (upper right quadrant)

An image by image comparison of the Maris plate-I photograph with the Maris plate-III Nagy photograph-C indicates that the Maris plate-III Nagy photograph-C used electrotypes of the “8”, and “11 1/2” obverses and the “F” reverse which were made from coins of higher quality than those appearing in the Maris plate-I photograph. Additionally, the “P” reverse (still mislabeled as “P” rather than “p”) appears to be an electrotype made from a lower quality coin than is illustrated in the Maris plate-I photograph, while the “11” and “61” obverses were made from different but equivalent coins. Many of these changes represent new coins obtained by Dr. Maris after publication of his book in 1881. For instance, the Appleton “11” obverse on the Maris plate-I photograph was replaced with the Maris 1886 sale, “11-H” obverse.¹⁶ Errors noted on the Maris plate-III Nagy photograph-C include the absence of a label on the “x” reverse, and the presence of a ligature line between the “r” and “u” reverses. The most significant change illustrated in the Maris plate-III Nagy photograph-C, however, is the rearrangement of the electrotypes among the obverses “66”, “67”, “73”, and “74” (the latter is from Maris plate-III Nagy photograph-D) and the reverses “v” and “aa” (the latter is from Maris plate-III Nagy photograph-D). The entire rearrangement of Maris plate-III Nagy photograph-C, which partially extends into Maris plate-III Nagy photograph-D, was undertaken to display a blank planchet labeled with a “II” designation at the location of obverse “66” in Maris plate-I photograph. The only other major change in this photograph is a ligature line drawn between the “u” reverse and the blank planchet.

Maris plate-III Nagy photograph-D (lower right quadrant)

An image by image comparison of the Maris plate-I photograph with the Maris plate-III Nagy photograph-D indicates that the Maris plate-III Nagy photograph-D illustrated electrotypes of obverses “55” and “57”, as well as reverses “e” and “m”, which were made from coins of higher quality than those appearing in the Maris plate-I photograph. Dr. Maris owned two “57-n” specimens with one appearing in the Maris Plate-I photograph and the other in the Maris plate-III Nagy photograph. Both were sold in the 1886 auction of Dr. Maris’s coins.¹⁶ Other differences include the removal of the “81” and “82” obverses, as well as the “ff” reverse. Finally, a rearrangement of the obverses “78”, “75”, “80”, and “82” from the Maris plate-I photograph and the reverse “ff” has occurred (the rearrangement of “aa” and “74” was discussed above). The rearrangement is the result of adding a new die combination “83-gg” (which will later be changed to “83-ii”). The insertion was made at the expense of losing the representation of the “81” and “ff” dies, as well as losing the “82” obverse, which was discovered to be a “36” obverse and not a different variety.¹⁴ The “w” reverse electrotype appears damaged compared to the Maris plate-I photograph image, though the images may be from the same coin.

Conclusions concerning the Maris plate-III Nagy photographs

1. One could hypothesize the zinc sheet with electrotypes depicted in Maris plate-III Nagy photographs was made by someone other than Dr. Maris at some later date. Since T. Harrison Garrett bought the entire Maris collection intact for \$551 in 1886 using Harold P. Newlin as his agent,²⁶ it is conceivable that Mr. Garrett might then have produced electrotypes of all the coins and made the plate. However, there is no evidence that Mr. Garrett was interested in making electrotypes of any of the other high rarities in his vast collection of colonial and confederation era coins. It is known that Dr. Maris excelled in the production of electrotypes and it is not unreasonable to assume that the similarities between the Maris plate-I and Maris plate-III would indicate Dr. Maris as the originator of the Maris plate-III. Thus, we may conclude the development of the Maris plate-III was either the product of Dr. Maris or directed by Dr. Maris. As previously mentioned, the Chapman sale of the Maris estate¹¹ notes the existence of two zinc plates holding electrotypes of New Jersey coins.

2. Maris plate-III was made some time after the Maris plate-I. We know Maris plate-I was made sometime prior to the publication of Maris's *A Historical Sketch of the Coins of New Jersey* in 1881.¹ We also know that the three major rearrangements in the Maris plate-III were done to allow a listing of three new varieties – the “21-R”, the “83-gg” (later changed to “83-ii”), and the “u-blank obverse.” In the sale of Dr. Maris's New Jersey collection in 1886¹⁶ the two following lots are described:

[Lot] 393 No. 21-R. This coin came into my possession since the issue of my work on N.J.s. It is in good condition, and, as far as I know, the only one in existence. Very desirable.

[Lot] 500 Unique New Jersey, received since the issue of my work. Condition good. Date 1787. Straight plow-beam: horse head thrown back, and long nose. Rev., a small wedge-shaped shield, with seven pales. The legend looks like * E * PLURIBUS * UNUM * (the N upside down.) [variety “83-gg” = “83-ii”]

These coins, discovered after the publication of Dr. Maris's original work, explain the reason for two of the three major rearrangements on Maris plate-III. Additional sources need to be consulted to explain the third rearrangement associated with the addition of the “blank” obverse – “u” image. A clue to this rearrangement is provided in the same 1886 auction catalog of Dr. Maris's coins:¹⁶

[Lot] 475 Rev., u, slightly pounded. Obv., blank and perfect Unique.

This coin is probably the same item that is more completely described in the Spiro sale²⁷ of New Jersey coppers as lot 1631:

[Lot] 1631 1787-1788. Reverse “U” (*sic*) struck with blank obverse Ex. Maris V. Fine UNIQUE

It sold for \$14, which was a very strong price.

Although the Spiro catalog described the reverse as “U” rather than “u”, the description confirms that lot 475 in the Maris sale refers to a “blank” obverse – “u” coin. Therefore, it is quite likely that the third rearrangement on the Maris plate-III was made to include the rare uniface “u-blank obverse” that was sold in the Maris collection, as a unique coin, and 69 years later was sold in the Spiro collection²⁷ as a unique New Jersey coin able to command a high price. This is partially substantiated by the presence of a ligature line connecting the “u” reverse with the blank obverse on the Maris plate-III. However, the labeling of the blank obverse on the Maris plate-III as “II” is problematic, since all obverses were labeled by Dr. Maris with numbers. The “II” cannot represent the number eleven since this is already shown on the plate. We can only speculate on the reason why Dr. Maris placed “II” under the blank. Lou Jordan suggests that the “II” might represent the Roman numeral “II,” since Roman numerals were occasionally used to represent rare varieties.²⁸

Therefore, to summarize, the Maris plate-III was made by Dr. Maris sometime after his 1881 work was published. The reason for producing this new plate was to show three new coins which Dr. Maris thought to be unique and which he had found after the publication of his original book – the “21-R”, the “83-gg [ii]” and the “u-blank obverse.” Maris plate-III was produced sometime between the publication of Dr. Maris's book in 1881 and his death in 1900. We can speculate that the date for making the plate was around 1886, since we know that all three new coins had been discovered by then and with the pending sale of his coins approaching, Dr. Maris may well have wanted a reminder of his beloved collection near at hand. This plate was once erroneously believed to have been purchased by Fredrick Canfield⁸ at the auction of Dr. Maris's remaining coins following his death in 1900.¹¹ We know that the plate was in Hiram Deats's possession in 1918¹² and later appeared in the auction of Dr. Jacob Spiro's coins in 1955.²⁷ Lot 1642 was described as follows:

[Lot] 1642 FRAME 25x22" Containing all 140 electrotypes of the Jersey cents. Mounted on white metal background and numbers as on Maris plates. V. Scarce.

The plate sold for \$90.00 to Willard Blaisdell of Elizabeth, New Jersey. The Maris plate-III was later sold to William Anton, Jr.⁸ who noted that the plate was enclosed in a black walnut frame dating to the 1880s, with a hand made glass cover. The glass contained bubbles and ripples consistent with glass made in the 1880s.⁸ This information provides further evidence that the Maris plate-III was the product of Dr. Maris.

3. The Maris plate-III Nagy photographs were made several years after the Maris plate-III was made. Steven K. Nagy was 72 years old when he died on August 29, 1958.²⁹ Assuming his active photographing career did not start until he was at least 18 years old, we can presume the photographs of the Maris plate III occurred sometime after 1904. William Anton, Jr. indicates that the Nagy photographs were made in the 1940s.⁸

MARIS PLATE-II PHOTOGRAPHS

Numismatists have long known that a zinc plate containing a set of New Jersey colonial coin electrotypes resided in The New Jersey Historical Society (NJHS). It had been assumed the plate was part of the Fredrick A. Canfield donation in 1927 of well over 100 varieties of New Jersey coppers, including such rarities as the "22-P", "16-d", "7-E" (electrotype), "8-F" (electrotype), "35-W", "79-ee", "66-u" and others.³⁰ However, NJHS records indicate the plate was actually donated in 1953 by a Hiram E. Deats of Flemington, NJ.³¹ From a letter by Mr. Deats published in *The Numismatist* in 1918,¹² we know that Mr. Deats owned two zinc plates containing New Jersey electrotypes which were attributed to Dr. Maris. One of the plates passed directly from his hands to The New Jersey Historical Society. On December 20, 2002, Roger Moore personally inspected the NJHS plate (Maris Plate-II) and arranged for photographs of the plate to be taken in a four-quadrant manner, similar to the Maris plate-III Nagy photographs. (See figure 8 A-D)

The general description of the Maris plate-II is that it consists of a thin zinc sheet, measuring exactly 18 inches by 24 inches, containing all 140 electrotypes – none were missing!! The lettering and numbering on the Maris plate-II was similar in size to the lettering and numbering on the Maris plate-III Nagy photographs, which is significantly smaller than what exists on the Maris plate-I photograph. There are a number of "rust" spots on the plate especially over some of the letters and numbers including, "2", "63", "26"*, "27", "30", "S", "V", "66", "65", "11", "H"*, "67", "w"*, "m"*, "aa"*, "75"*, "80"*, and the late die state "dd"*. (An asterisk "*" indicates a letter or number which was not readable due to rust. If the rust had been scraped off, the letters and numbers might have been readable; but this action was not felt to be appropriate by anyone other than an official artifact restorer.) The numbers, letters and ligature lines connecting the die combinations were punched or etched into the plate. Some could only be viewed by using magnification or by viewing from an angle. The reverse side of the zinc plate revealed that a hole had been drilled through the zinc sheet at each point where an electrotype was to be placed. Then each electrotype was individually positioned on the front of the zinc sheet and the hole filled with solder from the reverse, thus affixing the back of each electrotype to the zinc sheet. A deteriorating cloth backing was present covering a small portion of the back of the plate. An analysis of the differences between the Maris plate-II, the Maris plate-I photograph and Maris plate-III Nagy photographs based on an image by image comparison, is provided in the tables starting on sequential page 2516.



Figure 8A: Upper left quadrant of Maris plate-II photograph.

First of four photographs taken of the Maris plate-II in The New Jersey Historical Society (NJHS) collection. The plate of electrotypes was donated to the NJHS by H. Deats. The Figure 8 alphabetical labels indicate the following: "A" the upper left quadrant of the Maris plate-II, "B" the lower left quadrant, "C" the upper right quadrant and "D" the lower right quadrant. *Courtesy of The New Jersey Historical Society, Newark, New Jersey.*



Figure 8B: Lower left quadrant of Maris plate-II photograph.



Figure 8C: Upper right quadrant of Maris plate-II photograph.



Figure 8D: Lower right quadrant of Maris plate-II photograph.

Upper Left Quadrant			
Die	Maris-I versus Maris-II	Maris-I versus Maris-III	Maris-II versus Maris-III
3	S#	S#	S#
4	S#	S	S
1	S#	S#	S
A	S#	S	S#
2	S#	S#	S
B	S	S	S
7	S	S#	S#
6	S	S#	S#
C	S#	S	S
5	S	S#	S
25	S#	S	S
26	D II+	D III+	S
27	S#	S#	S#
51	S#	S#	S#
D	S#	S	S#
30	S	S	S
29	S#	S#	S#
28	S#	S	S
S	D I+	D I+	S
V	S	S	S
W	S	S	S
19	S#	D III+	D III+
31	S	S	S
L	S	S	S
16	S#	S#	S
34	S	S	S
35	S#	S#	S
48	S	S	S
M	D I+	S#	D III+
18	S	S	S
T	D I+	D=	D III+
15	S#	D I+	D II+
J	D I+	S	D III+
13	S	S	S
f	S	S	S

Comparative Tables: Shown in the columns are the coin image comparisons of the Maris plate-I photograph with the Maris plate-II photograph (first column), the Maris plate-I photograph with the Maris plate-III Nagy photograph (second column), and the Maris plate-II photograph with the Maris plate-III Nagy photograph (third column). The abbreviations stand for the following: S – comparisons indicate the coin images were essentially the same; S# – comparisons indicate the coin images were from the same coin but differences due to electrotpe imperfections were noted; D – differences in the coin images were noted with the plate having the better image indicated by I+ or II+ or III+; D= – comparisons of the coin images indicate the coin images were from different coins but the condition of the two coins were equivalent, and “-” is used when one of the plates did not have the indicated obverse or reverse for comparative purposes.

Lower Left Quadrant			
Die	Maris-I versus Maris-II	Maris-I versus Maris-III	Maris-II versus Maris-III
N	D I+	S#	D III+
32	S#	S#	S
U	S#	S#	S
14	S	S#	S#
17	S#	S#	S
37	S#	S#	S
49	S#	S	S#
20	S#	S#	S#
21	S#	S#	S
33	S	S#	S#
K	S	S#	S
b	D=	D=	S
Y	D II+	D III+	S
X	S#	S	S
O	S	D III+	D III+
P	S#	S	S
22	S	S	S
40	S	S	S
38	S	S	S
41	S	S	S
43	S#	S	S
23	S#	S	S
24	D I+	D I+	S
39	S	S	S
a	S#	S	S
Z	S#	S	S
c	S#	S	S
d	S#	S	S#
R	S#	S#	S#
Q	S	S	S
52	S#	S#	S#
i	S#	S#	S#
42	D I+	D I+	S#
44	D II+	D=	D II+
45	S#	S#	S#

Upper Right Quadrant			
Die	Maris-I versus Maris-II	Maris-I versus Maris-III	Maris-II versus Maris-III
E	S#	S#	S#
8	D II+	D III+	S#
F	D II+	D III+	S
60	S	S	S
p	S#	D I+	D II+
61	D=	D=	S#
62	S	S#	S
9	S	S	S#
10	S#	S	S
h	S#	S#	S
64	D I+	S	D III+
r	S	S	S
63	D I+	S	D III+
q	S#	S	S#
g	D I+	S#	D III+
G	S#	S#	S
11	D=	D=	S
t	S	S	S
u	S	S	S
65	S	S	S
s	S	S	S
50	S	S#	S#
12	S	S	S#
11½	D II+	D III+	S#
H	S#	S	S#
66	S#	S	S
v	S#	S#	S#
67	S#	S	S#
36	S#	S	S
I ¹	S#	S#	S#
54	S	S	S
68	S	S	S
70	S#	S#	S#
x	S#	S	S#
73	S#	S#	S
Blank "II"	-	-	S#

1. Upper case i.

Lower Right Quadrant			
Die	Maris-I versus Maris-II	Maris-I versus Maris-III	Maris-II versus Maris-III
53	S#	S	S#
j	S#	S	S#
k	S	S	S
w	S	S#	S#
71	S	S	S
y	S	S	S
aa	S#	S#	S#
l ¹	S#	S#	S
55	S	D III+	D III+
m	S	D III+	D III+
69	S	S	S
72	S	S	S
z	S#	S	S#
74	S#	S	S#
47	S	S	S
56	S#	S	S#
n	S#	S	S#
76	S#	S	S#
cc	S#	S	S#
75	S#	S	S#
bb	S#	S#	S#
e	D II+	D III+	S
57	S#	D III+	D III+
58	S#	S#	S#
77	S#	S#	S#
dd ²	S#	S#	S#
dd ³	S#	S#	S#
78	S#	S	S
46	S	S	S
59	S	S#	S#
o	S	S	S
80	-	S#	S#
ff	-	-	-
81	-	-	-
82	-	-	-
83	-	-	S#
99	-	-	S#

1. Lower case L. 2. Early Die State. 3. Late Die State.

Maris plate-II-A (upper left quadrant)

Generally, the numbering and lettering system corresponds exactly with the Maris plate-I photograph and Maris plate-III Nagy photograph. The mislabeling of the “30” obverse on the Maris plate-III Nagy photograph does not occur on the Maris plate-II. A number of specific electrotypes differ between the three plates. For instance, the electrotypes obverses “26” and “15” are made from the same coins used for both the Maris plate-II photograph and the Maris plate-III Nagy photograph, and they are higher quality coins than the ones used in the Maris plate-I photograph. Similarly, the “S” reverse electrotypes were made from the same coin that was used for the Maris plate-II photograph and Maris plate-III Nagy photograph, but it was a poorer quality coin than the one used in the Maris plate-I photograph, which used the “28-S” reverse from the coin appearing in the 1886 Maris coin sale.¹⁶ Both the “M” and “J” reverses were made from the same coins used for the Maris plate-I photograph and the Maris plate-III Nagy photograph and are from a higher quality coin than appears in the Maris plate-II photograph. For obverse “19” the Maris plate-I photograph and Maris plate-II photograph use the same coin but it is a poorer quality coin than was used in the Maris plate-III Nagy photograph. Finally, the “T” reverse on all three plates are from different coins with the quality of the coins being similar in the Maris plate-I photograph and the Maris plate-III Nagy photograph, while a poorer one was used in the Maris plate-II photograph. The “M” reverse is correctly placed, as in the Maris plate-I photograph and not transposed with the “N” as in the Maris plate-III Nagy photograph. Of interest, the electrotypes of the “1” obverse of the St. Patrick halfpenny in Maris plate-III Nagy photograph and Maris plate-II show the same blob of metal in King David’s face. The significance of this is not known; however, a similar blob is not present in the Maris plate-I photographic image. One reason for the lack of the extra metal blob on King David’s face in the Maris plate-I photograph could be that the actual coin was used for this photograph!!

Maris plate-II-B (lower left quadrant)

The numbering and lettering is exactly the same as the Maris plate-I photograph and therefore differs in not having the rearrangement seen in the Maris plate-III Nagy photograph. However, instead of the rearrangement of coins, there is an extra ligature line etched in the zinc sheet running between the “21” obverse and the “R” reverse which is not found in the Maris plate-I photograph. Due to the positions of the electrotypes, this extra ligature line touches the side of the “23” obverse. While most of the electrotypes correspond to images in the Maris plate-I photograph, there are some differences. The “N” reverse is in the correct position (unlike in the Maris plate-III Nagy photograph), but the coin used to make this electrotypes is of poorer quality than the one used to make the images in the Maris plate-I photograph and Maris plate-III Nagy photograph. For the reverse “O”, the same coin was used in the Maris plate-I photograph and Maris plate-II photograph, but a better coin was used to make the electrotypes in the Maris plate-III Nagy photograph. In regard to the “Y” and “b” reverses, as well as the “24” and “42” obverses, electrotypes made from the same coins were used in the Maris plate-II photograph and Maris plate-III Nagy photograph, but they differ from the coins used in the Maris plate-I photograph, with the Maris plate-I photograph coin being better for the “Y”, poorer for the “24” and “42” and about equal for the “b” reverse. The “44” obverse differs in all the photographs with the “44” obverse in the Maris plate-II photograph being the best, while the images in the Maris plate-I photograph and Maris plate-III Nagy photograph are equivalent. Other observations include: the “I” reverse is a silvery color and the “42” obverse has been glued back onto the zinc sheet (done with shiny glue smeared around the electrotypes) in a lower position than originally placed, thereby covering over the spot where the number “42” should be located.

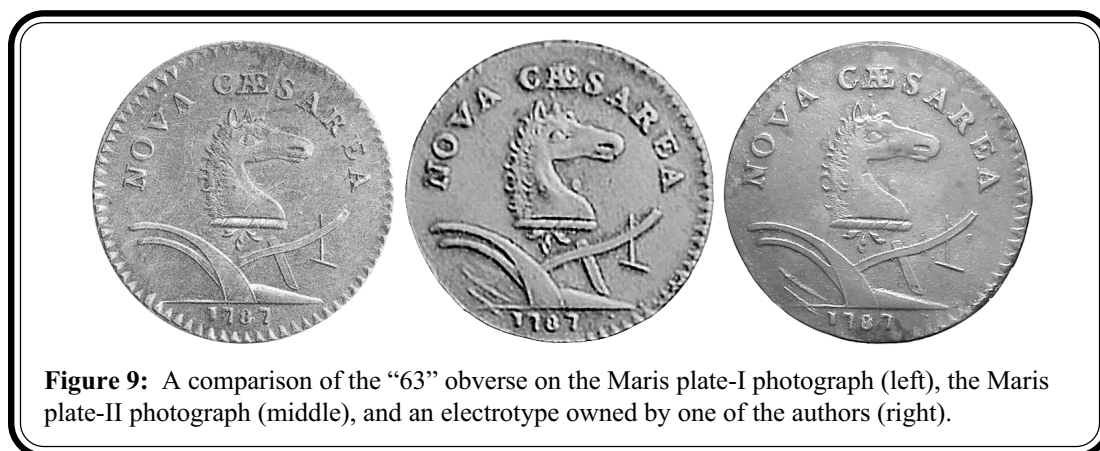


Figure 9: A comparison of the “63” obverse on the Maris plate-I photograph (left), the Maris plate-II photograph (middle), and an electrotype owned by one of the authors (right).

Maris plate-II-C (upper right quadrant)

The numbering and lettering system is exactly the same as the Maris plate-III Nagy photograph and therefore this plate contains the rearrangement of images which substantially differs from the Maris plate-I photograph. As in the Maris plate-III Nagy photograph, there is the addition of a blank electrotype labeled “II” which is connected with an etched ligature line to the “u” reverse. However, of interest, there is the absence of a ligature line between the “64” obverse and the “u” reverse. While most of the electrotypes correspond to the images in the Maris plate-I photograph, there are some differences. The Maris plate-II photograph electrotypes of poorer quality than the Maris plate-I photograph and Maris plate-III Nagy photographic images, include the “63” and “64” obverses, as well as the “g” reverse. Interestingly, the “63” obverse is the same as an electrotype that was found by one of the authors in a coin dealer’s junk box.³² (See figure 9.) The electrotype is inferior to the images in either of the other two plates due to defects in the specimen. Why would Dr. Maris use this electrotype when both his Maris plate-I photograph and Maris plate-III Nagy photograph have better images? Possibly this electrotype was added to Maris plate-II in more modern times due to the loss of the original electrotype from the plate. Some evidence exists that this could be the case. In 1961 William Anton Jr. personally inspected The New Jersey Historical Society plate and noted that,

It had no frame or glass. Some of the electrotypes were not on the Zinc Plate.⁸

When the plate was inspected in 2002, all the electrotypes were in place. Therefore, a presumption is that between 1961 and 2002, reattachment of the original electrotypes which had fallen off or the attachment of more modern electrotypes to replace missing electrotypes had occurred, in order to restore the plate. However, The New Jersey Historical Society has no records of a restoration having taken place.³³

Electrotypes that differ from the images shown on the Maris plate-I photograph but correspond with the images on the Maris plate-III Nagy photograph include the obverses, “11 1/2”, “8”, “11”, “61”, and reverse “F”. In each case, the images are either equivalent or better than the images in the Maris plate-I photograph. The only other difference is that the “P” (actually “p”) reverse is the same as the one shown in the Maris plate-I photograph and better than the electrotype shown in the Maris plate-III Nagy photograph. The “10” obverse has the same defect occurring between the “A” and “R” in the legend as is found in the Maris plate-III Nagy photograph. However, this defect is absent in the Maris plate-I photograph; yet a comparison of all three plates indicates that the electrotypes on all three plates were made from the same coin! The Maris plate-II “10” obverse

also differs from the Maris plate-III Nagy photograph with the presence of a “blob” of metal on the “1” of the date. Finally, the consistent error of using a “P” instead of a “p” persists on this plate.

Maris plate-II-D (lower right quadrant)

The numbering and lettering system is exactly the same as the Maris plate-III Nagy photograph and therefore this plate contains the same rearrangement of images which substantially differs from the Maris plate-I photograph. However, there are a number of peculiarities noted in this photograph including the lack of a label on the “80” obverse. The “e” reverse is an electrotype made from the same coin as the image in the Maris plate-III Nagy photograph which is better than the Maris plate-I photograph coin. However, the obverses, “55”, “57” and the reverse “m” are the same as the Maris plate-I photograph images and made from lower quality coins than in the Maris plate-III Nagy photographic images.

Conclusions concerning the Maris plate-II


The presence of two of the three major rearrangements found in the Maris plate-III Nagy photograph and a recognition of the third rearrangement with the addition of the extra ligature line between the “21” obverse and the “R” reverse, is a strong indication that the Maris plate-II is an intermediate plate made sometime between the Maris plate-I and the Maris plate-III. Further substantiation of this hypothesis is provided by the existence of a greater number of higher quality coins used for making the electrotypes for Maris plate-II than for Maris plate-I, and additionally fewer upgraded coins in Maris plate-II than found used in Maris plate-III. All three of the new varieties discovered by Dr. Maris, the “21-R”, “83-gg (ii)” and the “blank-u” are represented in the Maris plate-II but the lack of rearrangement in the left lower quadrant images provides a less than ideal way of showing the “21-R” die combination. The use of a lesser quality “63” obverse electrotype on the Maris plate-II as compared to the other two plates is puzzling. Further work will be necessary to identify if this is a modern substitution or an inadvertent error by Dr. Maris.

MARIS WOODBURYTYPE PLATE (RELEVANT OBSERVATIONS)

Charles Davis has provided the numismatic collecting community with a high quality reproduction of the Woodburytype plate of Dr. Edward Maris, showing 48 obverse and reverse dies of various Connecticut, Vermont and New Jersey colonial coins.³ The original photographic plate was offered for sale by Dr. Maris for 50 cents in April 1876, which was five years prior to the publication of his classic, *A Historic Sketch of the Coins of New Jersey*. There are no text or die attributions provided on the Woodburytype plate, though ligature lines between some die variety pairings are provided. Mr. Davis suggests this plate was made by Dr. Maris to fill in the gaps perceived to exist in the newly published, *The Early Coins of America* by Sylvester Sage Crosby.² There are numerous errors on the plate, a description of which is beyond the purposes of this discussion. The key point we wish to make concerning this very early plate made by Dr. Maris is that an image by image comparison of the 31 New Jersey colonial coin obverses and reverses with the Maris plate-I photograph shows that the Maris plate-I photograph used at least 10 obverses and reverses of coins of higher quality (specifically the obverses of “24”, “21”, “48”, “34”, and “53”, as well as the reverses “J”, “P”, “q”, “L”, and “j”.) Thus we may conclude that when Dr. Maris found a better example of a coin to represent a die variety, he would upgrade the coin used to make the electrotype for his next plate.

CONCLUSIONS

Four photographic sets containing parts of Dr. Maris's collection of New Jersey colonial coins exist – the Woodburytype plate published in 1876, the Maris plate-I photograph appearing in his 1881 book, *A Historic Sketch of the Coins of New Jersey*, the Maris plate-III Nagy photographs of the Maris zinc sheet with electrotypes (Maris plate-III) and the Maris-plate-II photographs of the Maris plate-II. The Maris plate-III survives in the private collection of William Anton, Jr. while the Maris plate-II resides in the holdings of The New Jersey Historical Society. Maris plate-II and Maris plate-III were created to show three new and, at the time, unique New Jersey die varieties. The Maris plate-II was made prior to the Maris plate-III, since several coin image upgrades are found only on Maris plate-III, and it also contains a major rearrangement of the coin images to show the “21-R” die combination in a manner not found on the two earlier plates. Both the Maris plate-II and Maris plate-III were produced after the original 1881 Maris plate-I photograph and subsequent to the discovery of the three new varieties. Since the “83-gg” (“83-ii”) was discovered in 1885¹³ and Dr. Maris sold the majority of his coins in 1886,¹⁶ the outside limit for the production of these plates or at least the electrotypes used to make the plates, was early 1886.

There is no information on the present location of the Woodburytype plate or the Maris-plate-I. Close inspection of the Maris plate-I photograph provides good evidence that the Maris plate-I was made up of a combination of electrotypes, actual coins and possibly photographs, rather than being a permanent plate of electrotypes. If so, the Maris plate-I coins would have been removed after being photographed. Published information indicates that only two zinc plates were made by Dr. Maris. Since we know the present location of two plates attributed to Dr. Maris (Maris plate-II in the NJHS and Maris plate-III in Anton Jr.'s collection), added support is provided to the conclusion that the Maris plate-I was not a permanent plate. Previous misattributions of zinc plates in the literature to the original Maris plate-I^{11, 12, 13} are understandable, since all the plates generally resemble one another. Only through a coin image by coin image analysis can the differences among the three Maris plates be recognized. 

ACKNOWLEDGEMENTS

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APPENDIX

Maris Plate-I Obverse Dies			
Die Label	Auction Appearance:Lot Number	Die Label	Auction Appearance:Lot Number
1	Maris:350 / Garrett:1386	41	Maris:432 / Garrett:1438
2	Maris:351 / Garrett:1385	42	MHS:99
3	Maris:352 (Not verified)	43	
4	Parmelee:368 / Garrett:1390	44	
5	Stickney:375 / Garrett:1391	45	Maris:439 / Garrett:1442
6	Maris:355 / Garrett:1392	46	
7	Parmelee:370 / Picker:181	47	Maris:443 / Garrett:1444
8	Parmelee:371 / Garrett:1393	48	Maris:445
9	Maris:359 / Picker:182	49	Maris:446 / Garrett:1447
10	Maris:360 / Garrett:1395	50	Maris:447
11	MHS:92	51	Maris:448 / Picker:225
11½	Parmelee:377	52	Maris:449 / Garrett:1450
12	Maris:365 / Garrett:1397	53	Maris:451 / Garrett:1451
13	Maris:367 / Garrett:1398	54	Maris:452
14	Maris:368	55	
15	Maris:369 / Garrett:1400	56	Maris:455 / Garrett:1454
16	Maris:373 / Picker:187	57	Maris:460
17	Maris:375 / Picker:188	58	Maris:462 / Garrett:1458
18	Maris:385	59	Frontenac:209
19		60	
20	Maris:389	61	Parmelee:432
21	Maris:390	62	
22	Parmelee:395 (Breen)	63	Maris:468A / Garrett:1464
23	Maris:396 / Picker:201	64	Maris:471 / Garrett:1466 (?)
24	Maris:397 / Garrett:1417	65	Maris:476 / Garrett:1469
25	Maris:400 / Garrett:1419	66	Maris:479 / Garrett:1471
26		67	Maris:480 / Garrett:1472
27	Maris:402 / Garrett:1421	68	
28	Maris:405 / Spiro:1494	69	Maris:482 / Garrett:1474
29	Maris:406 / Garrett:1423	70	Maris:483 / Garrett:1475
30	Maris:407 / Garrett:1424	71	Maris:484 / Garrett:1476
31	Maris:409 / Garrett:1425	72	Maris:487 / Garrett:1477
32	Maris:410 / Garrett:1426	73	Maris:489 / Garrett:1479
33	Maris:411	74	Maris:490 / Garrett:1480
34	Maris:414	75	Maris:491 / Garrett:1481
35	Parmelee:407 (Breen) (Now in NJHS ¹)	76	Maris:492 / Garrett:1482
36	Maris:420 / Garrett:1431	77	
37	Maris:424 / Garrett:1433	78	Spiro:1626
38	Maris:428 / Garrett:1435	80	Maris:495 / Picker:247
39	Maris:430 / Garrett:1436	81	Parmelee:445 / Spiro:1628
40	Maris:431 / Garrett:1437	82	Maris:497 / Garrett:1486

Appendix: The appendix is a compilation of the major auction appearances for each coin whose image is shown in the Maris plate-I photograph. The sale name and the lot number are listed for each die. If the "Auction Appearance" section is blank, the coin hasn't been traced. The auction company and date of sale for each appearance mentioned in the appendix is as follows: FRONTENAC: Bowers & Merena 11/1991; GARRETT: Bowers & Ruddy 10/1-2/1980; MARIS: Stan Henkels 6/21/1886; MHS: Stack's 10/23-24/1970; PARMELEE: Bangs 6/26-27/1890; PICKER: Stack's 10/24/1984; SPIRO: Schulman 3/18-19/1955; STICKNEY H. Chapman 6/25-29/1907. The BREEN reference indicates that the auction information was obtained from an unpublished manuscript (fall 1955) by Walter Breen on *New Jersey Coppers*. This information was compiled from various sources by Dennis Wierzba.

1. NJHS = The New Jersey Historical Society

Maris Plate-I Reverse Dies			
Die Label	Auction Appearance:Lot Number	Die Label	Auction Appearance:Lot Number
A	Maris:350 / Garrett:1386	d	
B	Maris:351 / Garrett:1385	e	
C	Maris:355 / Garrett:1392	f	Maris:424 / Garrett:1433
D	Maris:356 / Picker:180	g	
E	Parmelee:370 / Picker:181	h	Parmelee:375
F	Parmelee:371 / Garrett:1393	i	Maris:449 / Garrett:1450
G	MHS:92	j	Maris:451 / Garrett:1451
H	Maris:363 / Garrett:1396	k	Maris:452
I ¹	Maris:366 / Picker:184	l ²	Maris:453 / Picker:228
J		m	
K	Maris:376	n	Maris:455 / Garrett:1454
L	Maris:407 / Garrett:1424	o	Frontenac:209
M	Maris:385	p	Parmelee:432 (?)
N	Maris:390	q	Maris:468A / Garrett:1464
O	Maris:391	r	Maris:469 / Picker:236
P	Maris:397 / Garrett:1417	s	Maris:470 / Garrett:1465
Q	Maris:398 / Picker:204	t	Maris:471 / Garrett:1466
R	Maris:396 / Picker:201	u	Maris:476 / Garrett:1469
S	Maris:405 / Spiro:1494	v	Maris:480 / Garrett:1472
T	Maris:371 / Picker:186	w	Maris:482 / Garrett:1474
U	Maris:411	x	Maris:483 / Garrett:1475
V	Maris:417 / Picker:206	y	Maris:484 / Garrett:1476
W	Parmelee:407 (Now in NJHS)	z	Maris:487 / Garrett:1477
X	Maris:422 / Picker:211	aa	Maris:489 / Garrett:1479
Y	Maris:427 / Garrett:1434	bb	Maris:491 / Garrett:1481
Z	Maris:428 / Garrett:1435	cc	Maris:492 / Garrett:1482
a	Maris:430 / Garrett:1436	dd ³	
b	Maris:431 / Garrett:1437	dd ⁴	Spiro:1626
c	Maris:429 / Picker:216	(ff)	Maris:495 / Picker:247

1. Upper case i. 2. Lower case L. 3. Early die state. 4. Late die state.

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1 Maris, Edward, *A Historic Sketch of the Coins of New Jersey*, Philadelphia: William K. Bellows, 1881.

2 Newman, Eric, Bibliographic Foreword, in the reprint of Sylvester Crosby, *The Early Coins of America*, Lawrence, Mass.: Quarterman Publications, Inc., 1983.

3 Davis, Charles, "The Woodburytype Plate of Dr. Edward Maris," reprint, Wenham, Mass.: Quarterman publications, 1996.

4 Personal communication on April 13, 2003 from Charles Davis to Roger Moore, indicating that yellow paint was applied by Dr. Maris to the photographs. Charles Davis has seen a number of original plates without the brass splashes painted on the St. Patrick crowns. His supposition is that Dr. Maris would paint the brass splashes on the photographs as he sold them. Those photographs, and books with photographs that did not sell, did not have the photograph painted with yellow paint.

5 Dan Freidus, Ray Williams, Charles Davis, and Roger Siboni each made a comparison of their own original Maris plate-I photographs with the Kesse photograph of an original Maris plate-I photograph. Charles Davis indicates the Kesse plate was made from an original Maris plate-I photograph located in the Library of Congress. The comparisons show that for original Maris plate-I photographs with painted on brass splashes, each differ from the Kesse plate gray areas which indicate brass splashes. The presumption is that each of the brass splashes was painted on by hand and differs in shape and size. The Williams original plate-I photograph has not been acid treated and shows brass splashes on both of the St. Patrick coins' crowns. Dan Freidus has two original plates, neither having been acid treated, and both having no evidence of yellow splashes. Roger Siboni's plate has been acid treated and still has evidence of yellow brass splashes on both crowns.

6 Bowers & Ruddy Auction Catalog of the J. W. Garrett collection, October 1980.

7 Personal e-mail communication from Ray Williams to Roger Moore on April 19, 2003, indicating that in Williams's original Maris plate-I photograph the ligature lines actually went over the coin images on a number of coins, including the "23" obverse and the "K" reverse. The original Maris plate-I photograph in Moore's collection did not show a similar overlap. One way the overlap could have occurred would have been if the large photograph had been printed first with only coin images and then run through a second printing adding the ligature lines and perhaps the numbers and letters. Further study of a larger number of original Maris plate-I photographs is warranted, based on these observations.

8 Anton, William, Jr., *The First New Jersey Symposium*, pp. 37-41, transcribed and edited by Roger Siboni, private publication of a limited edition of 100 copies.

9 Four quadrant photographs of the Maris plate-III (A through D) from a reprint of an original set of "Nagy plates" in the Colonial Newsletter Foundation collection with permission from Jim Spilman.

10 Four quadrant photographs, commissioned by Roger Moore, of the Maris plate-II (A through D) which is in the holdings of The New Jersey Historical Society. Photographs provided courtesy of The New Jersey Historical Society, Newark, New Jersey.

11 S. H. & H. Chapman Auction Catalog, "Collection of Coins and Paper Money of the Late Dr. Edward Maris," 11/16-17/1900, p. 81. Lot "1383 Maris. Titles only (8). Photos of N.J. cents, Part of plate... ." And Lot "1384 Maris. Electrotypes of N. J. Cents arranged in order and numbered as the plate and from which the plate was photographed. Each piece finely made and soldered to sheet of zinc. Only two made!"

12 Deats, H. E., Letter to the Editor, *The Numismatist*, v. 31, 1918, p. 217.

13 Anton, William, Jr., "A Modern Survey of the Copper Coinage of the State of New Jersey," *The Colonial Newsletter*, v. 14, # 2 (July, 1975), sequential pp. 487-513.

14 Moore, Roger, "Edward Maris, M.D. - Numismatist," *The Colonial Newsletter*, v. 37, # 3 (December 1997), sequential pp. 1733-49.

15 Kesse, Bruce, *The State Coinage of New Jersey*, Glen Rock, NJ: Bruce Kesse, Inc., 1988.

16 Stan V. Henkels Auction Catalog, "Dr. Maris's Collection of American Coins," June 21, 1886, pp. 23-30.

17 Private communications between Dennis Wierzba, Roger Moore, Ray Williams, and Roger Siboni following the presentation of "The Nagy Plates" by Roger Moore at the November 2002 New Jersey C-4 Symposium in Boston, Mass.

18 Personal communication between William Anton, Jr. and Dennis Wierzba.

19 Four quadrant photographs of an original Maris plate-I photograph in the private collection of Roger Moore. The Moore original Maris plate-I photograph had been acid treated. There is no evidence of a brass splasher on the crowns of either of the St. Patrick halfpenny or farthing. Individual coin images appearing in the various figures were taken from an original Maris plate-I photograph in the private collection of Ray Williams. The Williams original plate-I photograph had not been acid treated and shows brass splashes on both of the St. Patrick coins' crowns.

20 "Y" reverse of the actual Maris plate-I photograph coin in the private collection of Roger Moore.

21 "29" obverse of the actual Maris plate-I photograph coin in the private collection of Roger Moore.

22 "v" reverse of the actual Maris plate-I photograph coin in the private collection of the Roger Siboni.

23 "53" obverse and "j" reverse of the actual Maris plate-I photograph coin in the private collection of Roger Moore.

24 Personal communication on April 13, 2003, from Charles Davis to Roger Moore indicating that Crosby was known to have obtained both obverse and reverse images of the same coin in a photograph by first photographing one side of the coin and then using that photograph next to the side of the coin that had not been photographed. An interesting observation from two original Maris plate-I photographs made by Ray Williams is that some of the coin images in the original photographs are lighter than others. A question that arises is whether the lighter coin images could possibly identify images made from photographs or electrotypes in the Maris plate-I photograph, rather than actual coins. Further study would be required in order to refute or support this hypothesis.

25 Full sized color photograph of the Maris plate-III donated by William Anton, Jr. to the Colonial Coin Collectors Club in 2002.

26 Bowers, David, *The History of United States Coinage as Illustrated by the Garrett Collection*, Los Angeles: Bowers and Ruddy Galleries, Inc., 1979, p. 456.

27 Hans M. F. Schulman Auction Catalog, "Public Coin Auction" (the Jacob N. Spiro collection of N. J. Cents), March 18-19, 1955, pp. 92-100 with plates.

28 Personal e-mail communication on April 5, 2003 from Lou Jordan to Roger Moore.

29 Nagy, Steven K. "Obituary," *The Numismatist*, v. 72, (1959) p. 298.

30 Letter written on October 4, 1995, from Catherine Quintana, Collections Manager of The New Jersey Historical Society, to Roger Siboni.

31 Personal e-mail communication on November 6, 2002, from Tim Decker, Collections Manager of The New Jersey Historical Society, to Roger Moore.

32 "63" electrotpe in the private collection of Roger Moore.

33 Personal communication on April 15, 2003, from Tim Decker, Collections Manager of The New Jersey Historical Society regarding the absence of any documentation in the NJHS concerning any repair or restoration provided to the Maris plate-II, to Roger Moore.